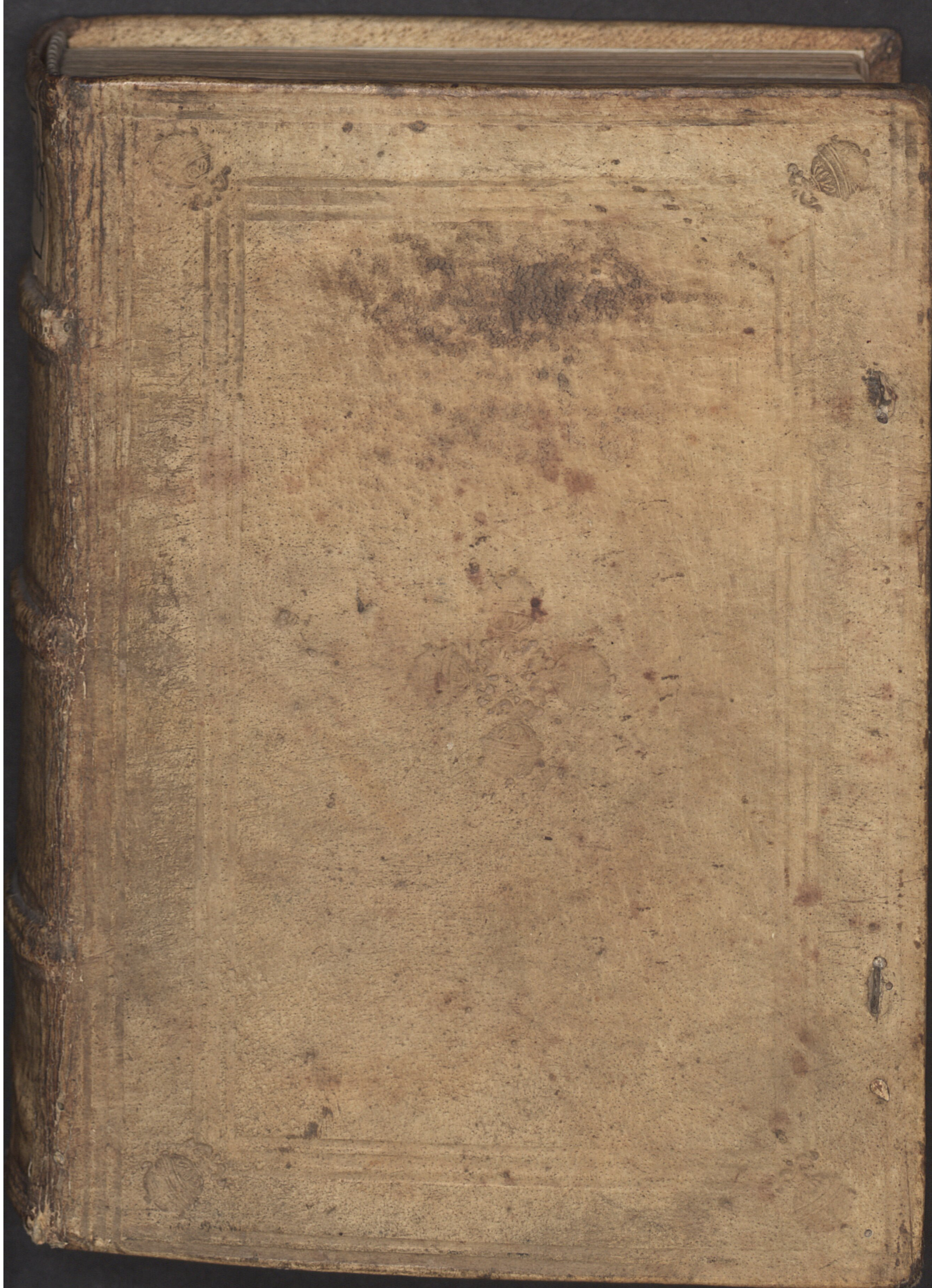






4 Eph. astr.

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Reinhold







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# PRIMVS LIBER

TABVLARVM DIRECTIONVM.

DISCENBVS PRIMAELEMENTA

ta Astronomiae necessarius &

utilissimus.

HIS INSERTVS EST CANON

secundus ad singula scrupula quas

drantis propagatus.

ITEM NOVA TABVLA CLIMATA

tum & Parallelorum, item umbrarum.

APPENDIX CANONVM SECVNDI

Libri Directionum, qui in Regiomontani

opere desiderantur.

A V T O R E E R A S M O

Rheinholdo Salueldensi.

Cum gratia & privilegio Caesareae &  
Regiae Maiestatis.

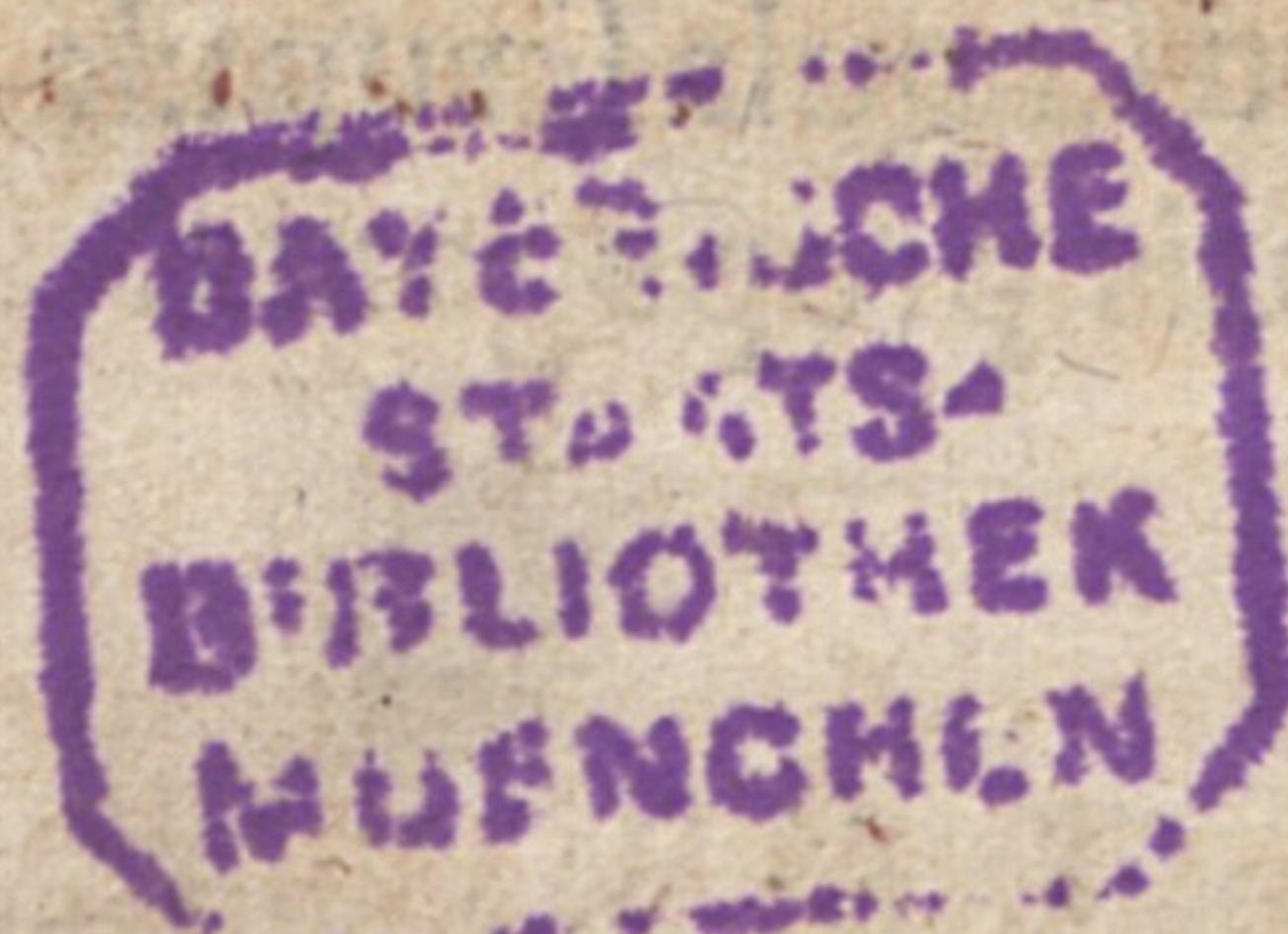
T V B I N G A E A P V D H A E R E.

des Vlrici Morhardi. Anno

M. D. LIIII.

*Gp. h. Astr. 40*  
*102*  
*Reinholdus*









ILLVSTRISSIMO PRINCIPI

AC DOMINO DOMINO ALBERTO,

Marchioni Brandenburgensi seniori, Duci Prussiae, Stetini &

Pomoranie, Domino et Burggraui Noribergensi,

Domino suo Clementissimo. Erasmus Rhein-

holt, Salueldensis. S. D.



NCIDIT HVIVS OPE

ris editio in tempus turbulentum, quo exercitus  
Imperatoris Caroli, & Regis Gallici per Germa-  
niam uagabantur, & in Saxonia bellum Brunsvi-  
cense motu erat. Itaque cum in publica & priuata  
mœsticia, ut fit, sepe cogitem de communibus calamitatum hu-  
manarum causis, & de conseruatione Ecclesiae, quam filius Dei  
promittit, interdum ut uentis, mens abstrahitur ad philoso-  
phorum disputationes, qui etiam querunt, unde tam tristes con-  
fusiones sint in genere humano, & tam crebrae Regnorum mu-  
tationes. Nec enim falso dictum est illud in Senecae Tragedia,

Non sic Lybicus Syrtibus æquor

Furit, alternos uoluere fluctus.

Non Euxini turget ab imis

Commota uadis unda, niuali

Vicina polo, ubi cœruleis

Immunis aquis, lucida uersat

plaustra Bootes.

Vt præcipites Regum casus

Fortuna rotat.

Cumque non sine multorum calamitatibus ruant Imperia, an-  
xiae mentes quaerunt, unde tanta moles sit ærumnarum, & an  
leniri consilio possint. Fit hæc inquisitio difficilior quam si cogi-  
tant hunc mundum casu ex Democriti atomis confluxisse. No-  
bis uero qui scimus & esse Deum conditorem generis humani,

& 2 mentem



## EPISTOLA

mentem æternam, sapientem, ueracem, beneficam, iustam, castam, & sparsisse suæ lucis radios in homines, ac uelle in nobis lucere uirtutum intellectum, & discrimen honestorum & turpium, ut qualis sit ipse agnoscamus, et sciamus nos quoque oportere tales esse: non obscurum est hunc ipsum conditorem generis humani sapientem & iustum, uere & horribiliter irasci omnium hominum sceleribus. Cumque imperia ipse instituerit, ut Reges sint Custodes iustitiæ, excutit eos cum uiolant iustitiam, quia & iustus est, & conspici uult exempla sui iudicii. Ad hanc causam refert mutationes regnorum doctrina Ecclesiæ, quæ inquit, iustitia stabiliri thronum. Et alibi inquit. Regnum à gente in gentem transfertur propter iniustitiam hominum. Ac Daniel expresse inquit, Deus transfert regna & stabilis.

Nec uero tantum has poenas uox diuina denunciat, sed adfirmat etiam leniri eas propter Ecclesiam & doctrinæ propagationem, & hac spe mitigationem peti iubet. Hac erecti consolatione, peramus à Deo ut leniat ærumnas, & hac spe labores necessarios ad artium propagationem & conseruationem faciamus. Fatentur & philosophi euertere Imperia propter gubernatorum & populi scelera, Id enim & lux diuina in mentibus ostendit, & testantur omnium seculorum exempla. Sed tamen munire ea calliditate & humanis tantum præsidij conantur. Quæ quam sint infirma, exitus non dico teterrimorum Tyrannorum Phalaridis, Alexandri Pheræi, sed & innumerabilium aliorum, qui astutia & fortitudine et gloria rerum gestarum antecelluerunt, ostendunt, Philippi Macedonici, Pompeij, Iulij. Disputant igitur & propter alias causas accidere mutationes regnorum, uidelicet seu propter arcanum naturæ ordinem, seu propter Astrorum positus, & congressus. Plato enim scribit certas esse Regnorum periodos, ut cum plani numeri fiunt solidi, natura non progreditur ulterius, sed resistat. Nec uero tantum positus Astrorum regunt aut mutant Imperia, sed sunt alia



## DEDICATORIA.

alię potiores causę mutationum, uoluntas et iudicium Dei. Sed tamen ut de lue grassatura in locis certis prædici aliquid expositu astrorum potest, ita æstus & incendia animorum in regionibus certis utcunq; significantur magnis coniunctionibus stellarum, & luminum defectibus, ut Saxonicos motus aliqui prædixerunt ex congressu Saturni et Martis, qui fuit mense Februario, anno 1548. in Capricorno, quem significare genti Saxonice etiam bella uetusta ostendunt. Deinde in singulorum corporibus qui uiuunt, temperamenta & impetus, nisi regantur à Filio Dei, adsumunt aliquid à natura luminis. Possunt igitur commonefactiones aliquæ ab astrorum positu sumi. Verum semper mens intueatur & sciat longe potentio rem causam esse physicis causis, uoluntatem Dei, qui & punit scelera, & inter mundi ruinas; tamen immensa bonitate cœtum seruat, custodem ueræ doctrinæ, ut pars aliqua generis humani conditorem agnoscat & celebret. Etsi autem dolor me intuentem patriæ incendium, ad hanc commemorationem deduxit, tamen eo non est aliena ab hoc loco, quia simul consolationem complectitur de Ecclesie conseruatione. Hanc teneamus ancoram, quod certissimum est Filium Dei, ut in diluuiio arcam seruauit, & in ea familiam Nohe & doctrinæ testes & custodes, ita nunc quoq; Argonautas suos seruaturum esse. Hac erecti spe, doctrinarum semina posteris tradamus. Vt autem antea in æditione utilissimarum lucubrationum ad te Princeps Illustrissime scripsi, ut posteritas sciat te harum artium propagationem adiuuissē, & grata, sapientiam et uirtutem tuam prædicet, & alijs tanquam exemplum proponat: ita eodem consilio nunc ad te scribo, ac adfirmo gratitudinem tuæ magnificentiæ debere, & me, & illos quibus mei labores profunt, & rem publicam ipsam, quod conseruari doctrinam uitæ utilem curas, præsertim hoc tristi tempore, quo inter dissidia & ciuilia bella crescit barbaries & feritas, & cum aliæ honestæ artes, tum uero totus hic orbis artium, Arithmetica & Geo-



## EPIST. DEDICA.

metria, et ex his extracta motuum doctrina, turpiter negligitur. Decet autem hanc tuam senectam penè Nestoream utraq; laus, quòd Deo iuuante pia consilia, sapientia & animi moderatione perficis, ut tuæ gentes pace fruantur, & pacem religione, legibus, disciplina, optimis artibus ornas. Hec bona ut Deus tueatur, & ut te gubernet, ac tibi longius uitæ spacium concedat, toto eum pectore oro. Vere autem Dei opera sunt artium, quarum fons est ipsa Dei sapientia, patefactio & conseruatio. Sed organis utitur deus, excitat artificum, mentes ad inquisitionem, & inserit eis lucem ut multa uideant & inueniant, quæ extra aliorum conspectum posita sunt. Artificibus etiã attribuit sapientes Principes, qui cum intelligunt sui officij esse, ut curent artes uitæ utiles conseruari, opem ferunt his, quorum labore artes illustrantur. Quare & Deum fontem artium oro, ne doctrinæ lucem extinguere sinat, Tibi quoq; & hæc nostra studia et me commendo. Utilitas autem operis ex catalogo sequenti ab ijs qui hæc studia colunt intelligi poterit. Bene & foeliciter uale Princeps Illustriss. VVite

bergæ Anno 1553. Calen  
dis Februarij.



# ORDO SEV CATALOGVS

præceptorum huius operis.

- 1 Quomodo fiat ingressus lateralis in hos & alios Canones Astro-  
nomicos.
- 2 Quomodo fiat ingressus arealis
- 3 De ratione canonis sinuum ac de nonnullarum uocū significatione.
- 4 Dati arcus, uel datæ circumferentiæ sinus inueniendus est.
- 5 Dati sinus arcus inueniendus est.
- 6 Datis duobus laterib. trianguli orthogonij rectilinei reliquum in-  
ueniendum est.
- 7 Si trianguli orthogonij duo dentur latera, quorum alterum circa  
rectum est angulum, alterum uero subtendit eundem, dabuntur  
etiam omnes anguli eius, & reliquum latus.
- 8 Qua ratione conditus sit fecundus Canon, & condendus integer  
Canon doctrinæ triangulorum.
- 9 In triangulo rectilineo datis duobus laterib. circa rectum, datur  
uterque acutorum angulorum, itemq; latus recto supertensum.
- 10 Data parte zodiaci & anno ante uel post Christum, quomodo con-  
gruens ei declinatio inueniatur.
- 11 Qua ratione ad quamuis mundi ætatem iustus obliquationis seu  
declinationis Solaris Canon construendus sit.
- 12 Data maxima ☉ obliquatione, ad quod Ecclipticæ punctum dati  
quadrantis spectet data declinatio.
- 13 Data cuiusq; stellæ longitudine ac latitudine, quomodo declinatio  
eius inuestigetur.
- 14 Quomodo ad datum tempus condendus sit generalis Canon des-  
clinationum.
- 15 Quomodo ad datum tempus Canon declinationis stellæ non exces-  
santis 8. gradus latitudinis condendus sit, qui declinationes ste-  
larum errantium & inerrantium in zodiaco expeditius suppedit-  
et, ac sine calculi molestia.
- 16 Quomodo dati gradus Ecclipticæ ascensio recta calculo ruatur ad  
datum tempus.
- 17 Canon ascensionum rectarum condendus est conueniens dato tem-  
pori.
- 18 Data ascensione recta ad datum tempus gradus Ecclipticæ coor-  
dens inueniatur.

Dato



# CATALOGVS

- 19 Dato quocunq; arcu Ecclipticæ, quomodo ascensio eius recta inueniatur.
- 20 Dato arcu æquinoctialis circuli, & dato altero arcus eius extremo, qui arcus zodiaci in sphaera recta cum eo peroriatur, explorandum est.
- 21 Quomodo cuiusq; stellæ, cuius longitudo & declinatio data est, ascensio recta inueniatur.
- 22 Qui gradus Ecclipticæ cooriatur in sphaera recta, uel cœlum mediet, cum qualibet stella, cuius longitudo & declinatio data est.
- 23 Quomodo Canon differentię ascensionalis condendus sit.
- 24 Differentia ascensionalis cuiusq; puncti Ecclipticæ, uel cœli inuenienda est, data declinatione eius, & latitudine regionis.
- 25 Qua ratione Canones obliquarum ascensionum denuo condantur ad quamlibet mundi ætatem, seu ad quamlibet solis maximam obliquitatem.
- 26 Quomodo dati gradus seu puncti Ecclipticæ ascensio obliqua inueniatur, data latitudine regionis.
- 27 Ex ascensione obliqua in data regionis latitudine, uenandus est gradus seu punctum Ecclipticæ cooriens.
- 28 Dato quocunq; arcu Ecclipticæ, quomodo ascensio eius obliqua inueniatur, data regionis latitudine.
- 29 Dato arcu æquinoctialis, & dato altero arcus eius extremo, qui zodiaci arcus in data obliqua sphaera cum eo peroriatur.
- 30 Quomodo dati gradus seu puncti Ecclipticæ descensio, obliqua data latitudine regionis computetur.
- 31 Ex descensione obliqua in data regionis latitudine uenandus est gradus seu punctum ecclipticæ unâ descendens.
- 32 Obliqua ascensio uel descensio cuiusq; stellæ inuenienda est, data latitudine regionis.
- 33 Data latitudine regionis Arcus semidiurnus dati loci ☉ uel cuiusque stellæ inueniendus est.
- 34 Quantum temporis interiectum sit inter exortus et obitus duorum punctorum cœli in data regione.
- 35 Dato loco ☉, qua hora diei uel noctis quælibet stella oriatur, uel occidat in data regione.
- 36 Quod punctum Ecclipticæ cum quauis stella oriatur, uel occidat in data Latitudine regionis.
- 37 Dies, quo fiat stellæ ortus & obitus matutinus uel uespertinus explorandus



# P R A E C E P T O R V M.

- plorandus est.
- 38 Et dati puncti Zodiaci data declinatione, exploranda est maxima ☉ obliquatio.
  - 39 Data differentia ascensionali, & data declinatione stellæ, uel puncti, cuius est illa differentia, inuenienda est congruens latitudo regionis.
  - 40 Data differentia ascensionali, & data latitudine regionis, inuenienda est congrua declinatio.
  - 41 Data maxima ☉ obliquatione, & data latitudine regionis, inueniendus est arcus ecclipticæ semper adparens.
  - 42 Data maxima ☉ obliquatione, & dato arcu Zodiaci adparente, inuenienda est latitudo regionis.
  - 43 Dato loco ☉ & altitudine eius meridiana, inuenienda est latitudo regionis.
  - 44 Dato loco ☉ & latitudine regionis, inuenienda est altitudo eius meridiana.
  - 45 Data altitudine ☉ meridiana, & latitudine regionis, inueniendus est locus ☉.
  - 46 Data altitudine ☉, inuenienda est proportio gnomonis & umbræ.
  - 47 Data proportione gnomonis & umbræ, inuenienda est altitudo Solis.
  - 48 Data latitudine regionis & loco ☉, inuenienda est proportio gnomonis & umbræ meridianæ.
  - 49 Dato loco ☉, dataq; proportione gnomonis & umbræ meridianæ, inuenienda est latitudo regionis.
  - 50 Dato loco ☉, datae horæ æquinoctiales numeratæ ab ortu uel occasu, reducendæ sunt ad horas æquinoctiales, quæ effluxerunt à meridie.
  - 51 Datae horæ æquinoctiales in tempora æquinoctialia commutandæ sunt.
  - 52 Dato loco ☉, & horis, quæ à meridie effluxerunt, ascensio recta Mediæ cœli, item obliqua horoscopi inuenienda est.
  - 53 Dato loco ☉, & data ascensione, uel recta M. C. uel obliqua Horoscopi, quot horæ à meridie antecedentis diei præterierint, explorandum est.
  - 54 Dato loco ☉ & horis, quæ à meridie effluxerunt, gradus ecclipticæ, qui medium cœli transit, inueniendus est.
  - 55 Dato loco ☉, & horis, quæ à meridie effluxerunt, dataq; latitudi-



- ne regionis, gradum horoscopi inuenire oportet.
- 56 Data ascensione recta M. C. uel obliqua horoscopi, & datis horis, quæ à meridie antecedentis diei effluxerunt, inueniendus est locus ☉.
- 57 Ad datum tempus in data latitudine regionis, constituenda est figura cœli iuxta Firmici aut Ptolomei uiam.
- 58 Ad datum tempus in data latitudine regionis constituenda est figura cœli iuxta uiam Abrahæ Auenesræ, uel Regiomontani.
- 59 Ad datum tempus in data regione constituenda est figura cœli iuxta Campani uiam.
- 60 Ad datum tempus in data regione, constituenda est figura cœli iuxta Alcabitium uel potius Iohannem de Saxonia.

Finis Præceptorum.



# P R A E F A T I O

Authoris.

**N**on dubito et doctos nec malos viros admiraturos esse, cur post clarissimum virum Iohannem Regiomontanum, cuius aeterna uigebit memoria apud posteros, harum mathematicarum artium studiosos, nec ingratos, ausim ego tabulas Directionum in lucem emittere. Etsi autem docti ac candidi, facile intelligant consilium meum, uel obiter introspecto opere nostro: tamen studiosorum gratia breuiter nonnullas causas commemorandas duxi. Primum igitur quidam doctissimi uiri ex Noruegia & Suecia, & alijs locis ante aliquot annos precibus a me obnixè contenderunt, ut & quadrantem ascensionum obliquarum absoluerem, adijceremq; plures positionum particularium Canones operi Regiomontani: quod etsi pulcherrimum esset, & late usum haberet, tamen regionibus in quibus ipsi nati essent, atq; educati, parum inferuïret. Horum optimorum uirorum eximia erga me beneuolentia, eruditio atq; uirtus primum incitauit me ad suscipiendum hunc laborem nec exiguum, nec ualde spetiosum. Deinde manifestum est tabulas seu Canones generales Regiomontani esse pertenuës, ac propterea usum earum satis difficilem & operosum. Plurimum autem me illud mouit, ut subirem hoc onus calculationum, Arbitrabar discentium studijs maxime profuturum, si ratio compositionis tabularum seu Canonũ, quæ pro tempore, id est, unâ cum maxima solis obliquatione mutantur, perspicue monstraretur. Quo nomine gratias mihi agent spero studiosi, qui expetunt prima doctrinæ astronomicæ elementa penitus introspicere atq; intelligere. Quis enim præcepta de doctrina ascensionum rectarum & obliquarum, de declinationibus, ortu & obitu stellarum, de discrimine Climatum & Parallelorum, deq; similibus rebus unquam dextrè intelliget absq; his nostris præceptis, uel similibus? Quare tum hanc do-



ctrinam compositione particularium Canonum fideliter tradi-  
di, tum generales Canones longe exhibeo uberiores, & quidem  
ad omnem Solis obliquationem accommodatos, inter quos præ-  
cipuus est FOECVNDVS, cui merito secundas tribuimus,  
cum tabulæ Sinuum primæ debeantur.

Iam quia sequentia præcepta tradimus adolescentum causa,  
qui primum degustant has suauissimas et sanctissimas artes, plu-  
rima repetemus ex Regiomontani propositionibus. Speramus  
autem doctos & bonos uiros duros nobis esse ueniam, quod  
in speciem tenuia & facilia uerbosius ac penè nimis accurate ex-  
plicare studemus. Planè enim confidimus, generosas naturas, per-  
ceptis his Elementis, auidius expetituras esse reliquas partes hu-  
ius Astronomicæ doctrinæ sublimiores. Quod si consecuti fue-

rimus, tum uero hanc operam nostram præclare lo-

catam nobis esse arbitramur. Sed ne præ-

fationi longius immoremur, præ-

cepta ipsa aggredi-

amur.



# I. PRAECEPTVM. QVOMODO FIAT IN-

gressus lateralis in hos Canones

Quia totam hanc sequentem explicationem de usu nostrorum Canonum instituiamus discendum causa, quorum studia inuitare simul & adiuuare conamur, ideo nonnulla praecepta praemittenda sunt, quae studiosis harum artium molliorem aditum praebent ad posteriora, nempe quid sit ingressus lateralis, uel arealis, & qua ratione uterque expediatur, ac similia quaedam. His enim initio dextrè cognitis reliqua explicatio de utilitatibus horum Canonum plus habebit tum lucis tum facilitatis.

Ingressus itaque lateralis uocatur, cum uel uterque datus numerus, uel unus dati numeri utraque pars extra Canonis aream sumitur. Maior autem uarietas casuum existit, datis duobus numeris, quam dato uno. Aut enim uterque eorum ex unica constat specie, ut partibus seu grad. tanquam integris, nec habet annexa sibi scrupula, Aut alter eorum constat non ex una sed duabus uel pluribus speciebus, ut partibus, quibus annexa sunt scrupula prima uel etiam secunda, Aut uterque denique datus numerus constat ex pluribus speciebus. Horum singulorum casuum tractatio exemplis declaranda est.

Primum cum uterque datorum numerorum ex partibus tantum constat, expers scrupulorum, ubi alterum eorum in capite Canonis, alterum uero in margine sinistro notaueris, communis angulus seu  $\propto$   $\rho\sigma\epsilon\lambda\iota\varsigma$  angularis praebit quaesitum numerum absque ulla molestia calculi uel correctionis. Voco autem communem angulum, in quo descendens & transuersus ordo se mutuo intersecant. Vt quaerenda sit obliqua ascensio ad finem decimi gradus dodecatemorii  $\odot$  in latitudine regionis 61. graduum. In Canone igitur ascensionum obliquarum, qui datae regionis latitudini defertur, quero 10. gr. extra in margine sinistro, notam uero  $\odot$  quod est quartum dodecatemorii a uerna sectione, sumo in capite Canonis. Itaque descendens ordo sub  $\odot$  intelligitur a supremo scilicet deorsum, transuersus autem ex regione decimi gradus a sinistra parte Canonis delatus, in dextram. In horum utriusque communi siue intersectione, siue angulo, siue profelide angulari offertur quaesita & iusta ascensio obliqua graduum 50 scr. 36<sup>a</sup>. neque ulla calculi emendatione praeterea opus est. Itaque cum fine 10. grad. dodecatemorii  $\odot$  ascendunt in data regionis latitudine aequinoctialis, tempora 50. 36<sup>a</sup>. scr. numerata uidelicet a uerna sectione. Nam in astronomico calculo numeri omnes pleni siue integri intelliguntur, ut hic intelliguntur 50. tempora absoluta, scrupula praeterea 36. de proximo tempore quinquagesimo primo. Quod si alter datorum numerorum non constat ex una specie sed pluribus, Canon non mox praebet iustum nume-

Quid sit lateralis ingressus. Varietas casuum.

Primus casus.

Communis angulus.

Numeri pleni.

Secundus casus.



Primum ex  
emplum.

Pars pro-  
portionalis  
ubi ad-  
denda, ubi  
subtrahenda.

Logistice  
scrupulo-  
rum astro-  
nomicorum  
discenda.

Alterum  
exemplum  
secundica-  
sus.

merum, sed proximum quendam, qui parte proportionali seu congruente emendandus est. Hunc casum duobus exemplis discat studiosus lector. Quærenda sit ascensio obliqua ad 10. gradus ☿ in regione, cui polus at- tollitur gradibus 61. 20<sup>a</sup>. Hic alter datorum numerorum nempe latitudo regionis constat e duabus speciebus, gradibus scilicet, & scrupulis primis. Proinde duplici introitu constituenda primum est differentia ascensionis congruens uni gradui, uel 60. scrupulis primis, ut æstimari inde possit pars proportionalis seu congruens 20. scrupulis, quæ gradibus latitudinis adiacent. Sub latitudine igitur 61. grad. quæ proxime minor est, data latitudine ascendunt cum fine 10. gradus ☿ tempora æquinoctialis 50. 36<sup>a</sup>. Similiter sub latitudine 62. grad. quæ proxime maior est, ascendunt cum eodem fine 10. grad. ☿ tempora tantum 47. 33<sup>a</sup>. Ut sit differentia utriusque harum ascensionum, 3. tempora 3<sup>a</sup>. conueniens uni gradui latitudinis, ut inter 60. & 61. Iam ut Venëris partem proportionalem seu congruentem 20. scrupulis adiacentibus, sic collocato in regula proportionum. 60. scrupula prima uel unus gradus dant 3. tempora & 3. scrupula prima, uel summatim scrupula 183. quot dant 20. scrupula prima. Colliges autem iuxta usitata præcepta doctrinæ numerorum scrupula prima 61. id est, tempus 1. scr. 1. Hæc est pars proportionalis auferenda ab ascensione 50. temporum 36<sup>a</sup> ad latitudinem 61. gradus, eò quod ascensio obliqua similis ad latitudinem 62. graduum decrescit. Nam si cresceret ascensio ad sequentem gradum, eadem pars congruens esset adijcienda. Itaque iusta & emendata ascensio obliqua congruens decimo gradui dodecatemorii ☿ in latitudine regionis 61. grad. 20. scr. existit temporum 49. 35<sup>a</sup>.

Cæterum, partem illam proportionalem, quæ toties in Astronomicis rationibus occurrit, multo facilius inueneris iuxta præcepta logistices scrupulorum astronomicorum, in quibus præceptis mediocriter exercitatus longe erit expeditior ad omnem calculum doctrinæ cœlestium motuum. Itaque si qui uolet in huius generis calculo foeliciter uersari, hic nostrum consilium haud aspernabitur, sed eius logistice usum aliquem prius sibi comparabit. Huius n. exercitii gratum deinceps fructum percipiet.

Alterum exemplum. Quærat obliqua ascensio 10. gradus 24. scr. dodecatemorii ☿ ad latitudinem regionis 61. graduum. Hic rursus alter datorum numerorum constat duabus speciebus, gradibus scilicet & scrupulis. Ideo similiter, ut in precedenti exemplo, ascensionum differentia uni gradui zodiaci competens inquirenda est, ut inde, quantum 24. scrupulis debeatur, coniectura fiat. Ut in latitudine regionis 61. grad. cum fine decimi quidem gradus ☿ ascendunt tempora 50. 36<sup>a</sup> sed cum fine 11. gradus



gradus, tempora  $51.57^a$ , ut sit harum ascensionum differentia tempus 1. scr.  $2^a$ , quæ debentur uni gradui ecclipticæ inter 10. & 11. grad. comprehenso. Ergo ad eliciendam partem proportionalem sic collocato. 60. scrupula prima dant 1. tempus  $21^a$ . scrup. uel summam  $81^a$ . scrupula, quot dant 24. scrupula. Colliges autem fere 32. scrupula prima, addenda temporibus  $50.36^a$ , eò quod posterioribus siue maioribus zodiaci segmentis semper respondet maior ascensio. Iuxta igitur ac emendata ascensio dati arcus zodiaci in data regionis latitudine erit, temporum  $51.8^a$ .

Sed si uterque datorum numerorum constat e pluribus quam una specie, operatio quoque gemina existit, ita ut pars proportionalis dupliciter  
*Tertius casus.*  
quidem, summam uero ter constituenda sit, iuxta formam utriusque exempli in precedenti casu, cuius tota uarietas in hoc tertio casu conspicitur, sicut iam patebit. Verbi enim gratia, quæ ratur obliqua ascensio decimi gradus, uicesimi quarti scrupuli dodecatemorii  $\odot$  ad latitudinem 61. graduum, 20. scr. Vides utrumque arcum, zodiaci scilicet et latitudinis, constare e gradibus & scrupulis primis. Primum igitur iuxta formam operationis præscriptæ, in posteriore exemplo secundi casus, reperio cum dato arcu zodiaci, coordinari tempora æquinoctialis  $51.8^a$  ferè, ad latitudinem quidem regionis 61. grad. sed ad latitudinem 62. grad. tempora  $48.7^a$ , ut sit differentia utriusque obliquæ ascensionis 3. temporum scr. 1. respondens rursum uni gradui latitudinis. Propter geminum itaque introitum in Canones bis iam eodem modo usi sumus parte proportionali. Verum quia latitudo regionis data non constat e solis gradibus, sed his accedunt 20. scrupula, ut sit media quædam inter gradus 61. & 62. ideo pars proportionalis congruens 20. scrupulis latitudinis de 3. temporibus, 1. scrupulo denuo inquirenda est, hoc modo, 60. scrupulis interiectis inter 61. & 62. gradus latitudinis, respondet tota utriusque ascensionis differentia temporum 3. scr. 1. quot respondent tempora 20. scrupulis, quibus data regionis latitudo superat 61. gradum. Colliges igitur tempus 1. ferè partem proportionalem, quæ nunc de temporibus  $51.8^a$ , ut ab ascensione dati arcus zodiaci ad latitudinem regionis 61. grad. auferenda est ideo, quia cum latitudine regionis decrescit ascensio, alioquin addenda esset pars proportionalis, si eadem ascensio cum regionis latitudine accresceret. Iuxta igitur ac emendata ascensio dati arcus zodiaci ad latitudinem 61. gra. 20. scr. existit temporum æquinoctialis circuli  $50.8^a$ , ferè.  
*Pars proportionalis ubi addenda, ubi subtrahenda.*

Hactenus omnem uarietatem lateralis ingressus complexus sum, in quo tractando uides alias non esse usum partis proportionalis alias uero eandem esse tum ex laterali tum ex descendenti differentia, semel atque iterum enucleandam, ut propositum nostrum adsequamur. Voco autem descendente differentiam



**Differen-** differentiam, ut quæ hic existit inter ascensionem 10. & 11. gradus ☿ la-  
**tia descen-** teralem uero, ut quæ inter similes ascensiones existit utriusque latitudinis  
**dens latera** 61. & 62. graduum. Nunc accedo ad arealem ingressum.  
**lis.**

## II. P R A E C E P T V M. Q V O M O do fiat ingressus arealis.

**Ingressus**  
**arealis**  
**quid.**

**Tres casus.**

Ingressus arealis dicitur, cum datus numerus in area Canonis sumitur, uel si duo fuerint dati, alter eorum duntaxat extra aream Canonis, alter uero intra eam sumitur, ita ut quæ sit numerus inueniendus sit extra in margine, siue laterali siue transversali, siue utroque. Occurrunt & hic tres casus, ut in laterali ingressu, sed paululum diuersa ratione, quorum casuum exempla rursus petemus ex Canonibus obliquarum ascensionum, eo quod in ceteris canonibus uel similiter tractatur hic arealis ingressus, uel aliquanto etiam facilius.

**Primus casus.**

Primus casus. Quando datorum numerorum alter qui extra sumitur, gradibus duntaxat absoluitur, alter uero in area sumendus, penitus sese offert, siue annexa habeat scrupula, siue minus, tunc inter duas lineas parallelas Canonis sursum ascendendo in margine transversali (siue caput & frontem tabulae adpellare libet) habebis zodiaci signum, Gradus autem eiusdem signi extra in margine sinistro preficiscendo inter alias duas parallelas recta uersus sinistram. Vt in latitudine 61. gradus, quæro cuius dodecatemorii, qui gradus coascendat cum temporibus 50. 36<sup>a</sup>, æquinoctialis circuli. Numerus graduum latitudinis extra sumitur, data uero ascensio in ipsa area Canonis, quia ascensionum Canones ita se habent. In Canone igitur obliquarum ascensionum, quæ destinata est latitudini regionis 61. graduum, quæro inter areales numeros tantisper, donec inueniam tempora 50. 36. uel ascensionem proxime minorem. At nunc tempora 50. 36<sup>a</sup>. penitus inuenio, ac dum inter duas parallelas perpendiculares, quibus hæc ascensio inclusa est, ascendo sursum, uideo in margine transversali dodecatemorion ☿ Similiter dum tendo inter duas transversales parallelas, quibus itidem inclusa est hæc ascensio, occurrit in extremo margine sinistro decimus gradus ☿ Pronuncio igitur tempora æquinoctialis 50. 36<sup>a</sup>. peroriri cum fine decimi gradus dodecatemorii ☿. Nam et in astronomicis rationibus & tabulis omnes numeri pleni siue absoluti intelliguntur, ut prius dictum est.

**Secundus casus.**

Secundus casus. Sed cum datorum numerorum alter quidem extra sumendus, gradibus tantum absoluitur, alter uero in area sumendus non penitus sese offert, sed alij maiores ipso & minores, adhibenda est pars proportionalis, ut ad exitum questionis peruenias, id quod sequenti exemplo perspicui potest. Sit enim propositum explorare, ad quod zodiaci punctum



punctum terminetur obliqua ascensio temporum  $51.8^a$  æquinoctialis. Canon quidem obliquarum ascensionum, qui computatus est ad latitudinem regionis  $61.$  graduum, non exhibet penitus datum arcum ascensionis seu æquinoctialis. Sed proxime minorem quidem  $50.$  temporum,  $36.$  scr. maiorem uero temporum  $51.57^a$ , ut sit horum circumiacentium arcuum differentia temporis  $1.$  scr.  $21^a$ . Et data ascensio excedit minorem horum arealium numerorum scrupulis  $32^a$ . Quare, ut partem proportionalem Venëris, sic instituenda est ratio, temporum unius & scrupulis  $21.$  uel summatim scrupulis  $81.$  temporum quadrant extra  $60.$  scrupula uel integer gradus, quot scrupula gradus unius quadrant  $32.$  scrupulis temporum. Inuenies autem fere  $24^a$  scrupula unius gradus. Et quia tempora quidem  $50.36^a$ , peroriuntur cum fine  $10.$  gradus dodecatemori  $\text{♄}$ , sed tempora  $51.57^a$ , cum fine undecimi gradus, ideo ex hoc calculo pronuntiandum est, tempora  $51.8^a$ , peroriri cum  $10.$  gradibus,  $24.$  scrupulis dodecatemori  $\text{♄}$ . Manifestum est enim plura æquinoctialis tempora ascendere cum undecimo gradu  $\text{♄}$ , ut posteriori, quam cum decimo gradu eiusdem, ut priori. Itaque in data regionis latitudine ascensio temporum  $51.8^a$ , terminatur post finem  $10.$  gradus  $\text{♄}$  scrupulis  $24.$  fere

Tertius casus. Quod si numerus datus extra sumendus non constat e solis gradibus, sed scrupulis etiam, utendum est duplici parte proportionali, in summa uero aliàs bis, aliàs ter, quemadmodum docent sequentia duo exempla.

Tertius casus.

Sit data latitudo regionis  $61.$  grad.  $20^a$  scr. data uero ascensio sit temporum  $50.36^a$ . De hac obliqua ascensione quæritur, in quod ecclipticæ punctum desinat. Canon igitur ascensionum, qui latitudini  $61.$  graduum adscriptus est, penitus offert datam ascensionem in area, ac sine ulla correctione mox ostendit in fronte dodecatemori  $\text{♄}$ , in sinistro uero latere decimum illius gradum. At canon sequentis latitudinis  $62.$  graduum, datam ascensionem non monstrat penitus, sed dum simili modo, ut in exemplo precedentis casus adhibeo partem proportionalem, colligo arcum ecclipticæ coorientem terminari in  $12.$  gradum  $11^a$  scr.  $\text{♄}$ . differentia igitur utriusque horum arcuum uel segmentorum zodiaci est  $2.$  graduum,  $11.$  scr. congruens integro gradui latitudinis inter  $61.$  &  $62.$  intercepto. Iam ut rursum addiscas partem proportionalem, sic instituenda est ratio calculi,  $60.$  scrupulis latitudinis congruunt duo gradus  $11.$  scrupula zodiaci, uel summatim  $131.$  scrup. quot zodiaci scrupula congruunt,  $20.$  scrupulis, quæ adiacent  $61.$  gradui latitudinis. Colliges igitur  $44.$  scrupula adijcienda  $10.$  gradibus  $\text{♄}$ , eo quod cum posteriori regionis latitudine maior zodiaci arcus peroriebatur. Quare ad latitudinem  $62.$  graduum,  $20.$  scr. ascendit

Exemplum primum.

ascensio



*Alterum  
exemplū.*

ascensio obliqua temporum 50. 36<sup>a</sup> peruenit ad 10. gradum 44<sup>a</sup> scr. dodecatemoriū  $\text{♄}$ . In hoc exemplo bis tantū usi sumus parte proportionali.

Alterum exemplum. Sit rursus data latitudo 61. grad. 20<sup>a</sup> scr. data uero ascensio eius latitudinis temporum 51. 8<sup>a</sup>. Quæritur arcus zodiaci unā peroriens, in quod ipsius punctum desinat: luxta formam igitur præcedentis supputationis in latitudine 61. quidem gradus, deprehendo datam ascensionem peroriri cum 10. gradibus, 24<sup>a</sup> scrupulis dodecatemoriū  $\text{♄}$ , sed in latitudine 62. grad. cum 12 gradibus 33<sup>a</sup>, scrupulis, eiusdem dodecatemoriū, ut sit differentia utriusque arcus zodiaci 2. graduum 9. scr. uel summam 129. scrupulorum, congruens integro gradui latitudinis, quo superat latitudo 62. grad. latitudinem 61. grad. Ratione igitur calculi, ut prius, instituta, colligo partem proportionalem 43. scrupulorum unius gradus zodiaci, quæ in data latitudine plura ascendunt, quam in minori latitudine 61. grad. in qua ascendeabant 10. grad. 24. scrup. Huic itaque arcui zodiaci adiecta 43. scrupula, ostendunt in latitudine 61. grad. 20<sup>a</sup> scr. datam ascensionem obliquam temporum 51. 8<sup>a</sup> peruenire ad 11. gradum 7. scrup. dodecatemoriū  $\text{♄}$ . Vides in huius exempli calculo dupliciter quidem, in summa uero ter usos nos esse parte proportionali.

*De secundis  
scrupulis.*

Cæterum in uarietate horum casuum tractanda, hactenus tantum prima scrupula adhibuimus. Quod si dati numeri præter integros gradus & scrupula prima, constent item et secundis, resolues in quærenda parte proportionali numeros omnes usque ad secunda. Veli eruditum & utile compendium artificum non adspernaris, sequere præcepta logisticae scrupulorum astronomicorum, ut prius dictum est.

Postremo exempla omnia ingressum lateralis tum arealis de promissimus studioso lectori, ex tabulis obliquarum ascensionum, quod in his omnis casuum horum uarietas manifestius conspiciatur. Verum in cæteris canonibus omnibus planè similis adhibenda est ratio, quemadmodum ex sequentibus erit perspicuum.

3. P R A E C E P T V M. De ratione canonis sinuum,  
ac de nonnullarum uocum significatione.

De laterali & areali ingressu in tabulas satis dictum est. Verum ut sequentium canonum ac præceptorum usus sit expeditior, alia quoque nonnulla præmittenda sunt de canone sinuum, item fecundo nostro. Ac primum rudis lectoris gratia, cui prodesse cupimus nostram operam, & uocabula huius negotij, & ratio canonis sinuum breuiter initio explicanda est.

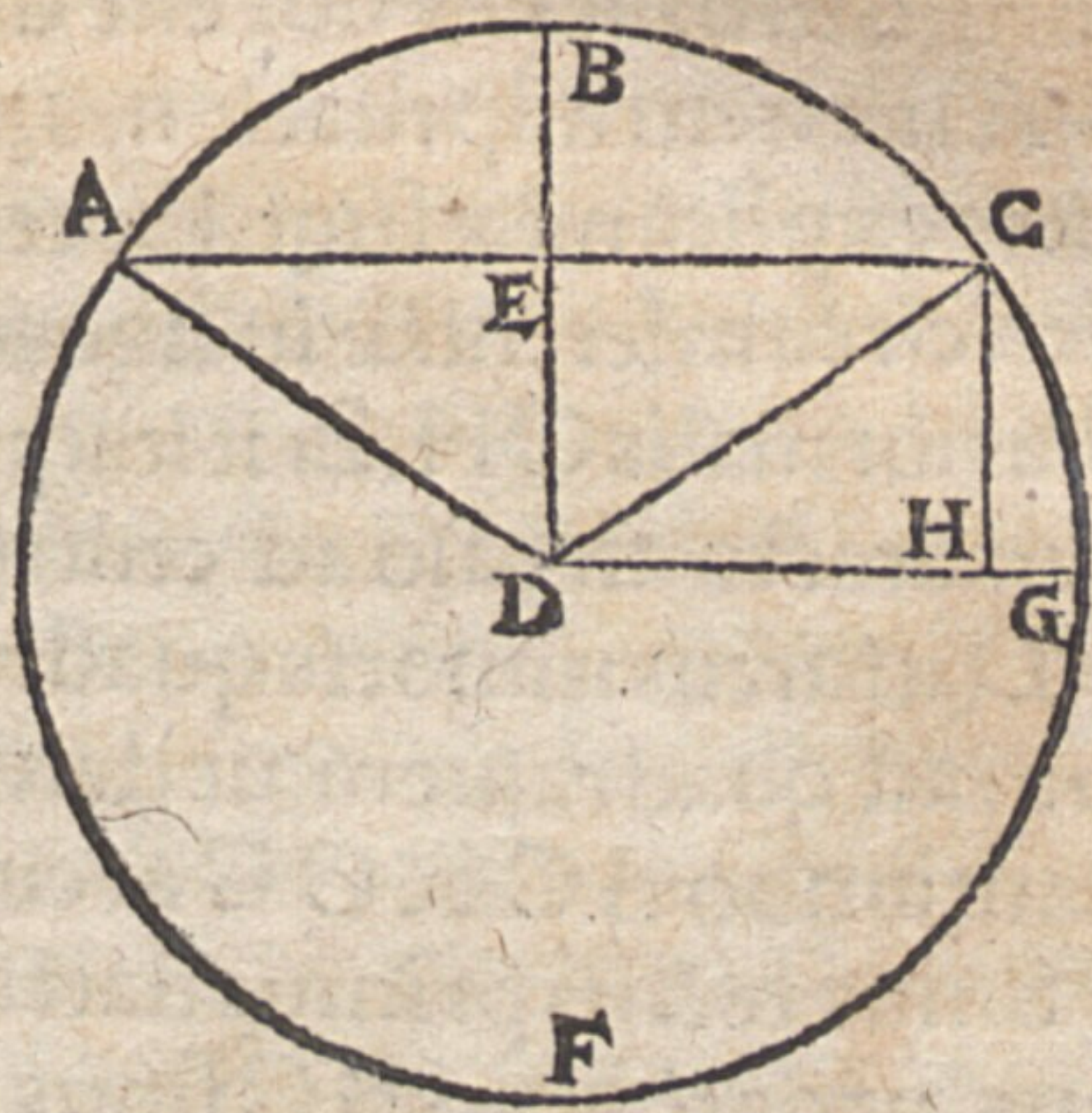
*Subtensa in  
circulo.*

Subtensa in circulo recta linea est, diuidens circulum in duo segmenta inaequalia



Inæqualia, ad quorum utrunq; pariter refertur, vulgo chorda nuncupatur, ut in circulo  $A B C$ , cuius centrum  $D$ , recta  $A B C$  dirimens circulum in duo segmenta inæqualia, quorum minus  $A B C$ , maius autem  $A F C$ , uocatur subtensa, eo quod utranq; circumferentiam subtendit, tam minorem semicirculo  $A B C$ , quam maiorem  $A F C$ .

Sinus est semissis rectæ subtendentis arcum, & ut vulgo dicunt, sinus est chorda dimidiata, ut secta linea  $A C$  per æqualia in  $E$ , erit  $A E$  uel  $E C$  sinus, id est, semissis subtensæ. Sicut autem tota subtensa refertur ad totum suum arcum seu circumferentiam, quam subtendit, ita admodum concinne ac erudite semissis quoq; subtensæ refertur ad semissem arcus illius, quem tota recta subtendit. Linea enim ex centro eiecta in auxilium circumferentiam per medium punctum subtensæ, simul ipsam quoq; circumferentiam partitur medietate, quemadmodum connexis rectis ex centro  $D A$ ,  $D C$  sequitur ex 8. primi & 36. tertij elementorum Euclidis. Præterea anguli ad  $B$  recti sunt per tertiam tertij Blei, ac propterea utrunq; triangulum orthogonium, nempe  $A E D$ , &  $C E D$ .



Sinus.

Itaq;  $C E$  sinus refertur ad arcum suum  $C B$ , uel  $A E$ , sinus ad arcum suum  $A B$ . Sicut enim inter  $C$  signum circumferentiæ &  $D B$  rectam normaliter incidentem in subtensam  $A C$  tam arcus quam  $C B$ , quam recta  $C E$  continetur. Ita & inter signum  $A$  & eandem rectam  $D B$  utrunq; continetur, arcus, inquam,  $A B$ , & recta  $A E$ .

Triangula  
duo ortho-  
gonia.

Iam ex hac descriptione, ratio canonis sinuum satis perspicue intelligi potest. Dum enim intelligis  $B C$  quemlibet arcum quadrantis circuli inchoatum ab eodem semper initio, Canon exhibet tibi sinum eius  $G B$  in particulis, quibus  $D B$  semidiameter circuli adsumitur, 10000000. decies millies mille. Estq; semidiameter totus sinus congruens quadrantis circumferentiæ circuli, sicut diameter circuli subtendit demidiatam circuli circumferentiam, maximaq; est omnium in circulo rectarum, ut 15. tertij elem. demonstrat.

Ratio cano-  
nis.

Totus si-  
nus.

Sunt, qui Adpellationem sinus, ut barbaram repudient, malintq; pro

γ 2 ea



**tionem sinus.** ea dici semissem subtenſæ, ut Ptolomeus loqui ſolet. Sed quia in uniuerſum in mathematicis diſputationibus gratiſſima eſt concinna orationis breuitas, ſatius uidetur unica dictione, quam longus uſus adprobauit, rem ipſam breuiter deſignare, quàm duas ſimul dictiones tanto cum faſtidio toties uel auribus ingeri, uel in præceptis tabularum, legentium oculis obijci. Prudenter enim Cicero monet, cum de rebus conuenit, in uerborum uſu faciles nos eſſe debere.

**Quadrans circuli circumferentia.** Aliæ item adpellationes, quæ in recentium ſcriptis uſurpantur, hic breuiter explicandæ ſunt. Ex centro igitur B, excitetur normalis DH occurrens circumferentiæ in ſigno G, & ex ſigno C in hanc ipſam demittatur, alia normalis CH. Erit itaq; BCG quadrans totius circumferentiæ circuli, ut a recto angulo ad centrum comprehenſus.

**Complementum.** Dati arcus minoris quadrante complementum intelligunt reliquum arcum ad quadrantem, ut dati arcus BC complementum dicitur CG, quoniam ambo BC & CG arcus, quadrantem circuli conficiunt.

**Sinus rectus primus.** Sinus rectus primus dati arcus uulgo uocatur is, quem prius deſcripſimus, ut dati arcus BC ſinus rectus primus eſt BC. Hunc rectum ſinum primum ſemper intelligimus, quoties ſimpliciter ſinum alicuius arcus dicimus.

**Sinus rectus ſecundus.** At ſinum rectum ſecundum adpellant eum, qui congruit complemento dati arcus, ut dati arcus BC ſinus rectus primus eſt, EC, ut dixi. Secundus autem CH congruens arcui CH, qui eſt complementum dati arcus BC. Sinum uerſum uel ſagittam uocant differentiam ſinus recti ſecundi & ſinus totius, ut dati arcus EC, ſinus uerſus uel ſagitta eſt BE. Eſt enim BE exceſſus totius ſinus DB ſuper ſinum rectum ſecundum CH, eò quod per 28. & 34. primi Elem. in parallelogrammo DECH æqualia ſunt DE, & CH, ut latera eius oppoſita.

#### 4. P R A E C E P T V M. Dati arcus, uel datæ circumferentiæ, ſinus inueniendus eſt.

**Deſcriptio canonis ſinuum.** Canon ſinuum ad ſingula ſcrupula prima totius quadrantis circumferentiæ circuli propagatus eſt. Itaq; tum in capite, tum in calce notatos habet integros gradus circuli ſeu partes trecenteſimas ſexageſimas, ſcrupula uero in utroq; margine, ſiniſtro & dextro, quorum ſiniſter deſcendendo auget numerum ſcrupulorum, dexter uero aſcendendo. Itaq; ſciat logiſta uſurus hoc canone, quod gradibus in capite quidem canonis reſpondeat ſiniſter margo, ſed gradib. in calce dexter margo. Item quoties dati arcus ſinum rectum primum inquiris (quem intelligimus ſemper, quoties ſimpliciter ſinum nominamus, ut dictum eſt) gradus in capite canonis accipiens



endos esse, in calce uero, dum dati arcus sinum rectum secundum uenas  
 ri libet. Postremo quando datus arcus constat gradibus & scrupulis tan-  
 tum primis, Canon ipse mox sine ulla parte proportionali exhibet iustum  
 & conuenientem sinum. Sed si primis scrupulis adhæserint secunda eti-  
 am, oblatus sinus emendationem aliquam desiderat, per partem pro-  
 portionalem, sicut exemplis iam ostendemus.

Sit igitur datus arcus 40. graduum, 36. scrup. ut arcus BC in præce-  
 denti diagrammate, cuius sinus BE inueniendus est. Gradus accipio in  
 capite Canonis & scrupula prima in margine sinistro eiusdem paginae,  
 angulus. n. communis ostendit quæ situm sinum CE sine ulla emendatio-  
 ne particularum 6507742, quarum totus sinus 10000000. Hanc  
 præcepti partem studiosum præcipue meminisse uolo, ut sciat hac ratione  
 semper utendum esse, quoties sinum dati alicuius arcus quærere iube-  
 bunt sequentia. Porro sinum ita inuentum uulgo uocant sinum rectum  
 primum dati arcus. Addo & breuiter de sinu recto secundo, atq; sagitta.

1. Exemplū  
 de sinu rec-  
 to, primo  
 & secundo  
 & uerso.

Dati arcus 40. gradus 36. scr. complementum est 49. gradus 24. Huius  
 complementi sinus rectus secundus inueniendus est. Gradus itaq; in cal-  
 ce Canonis eiusdem paginae se offerunt, scrupula uero iam sumenda sunt  
 in margine dextro. Angulus communis, ut prius, monstrabit mox quæ-  
 situm sinum eundem 6507742. Vniuersaliter. n. qui sinus existit rectus  
 primus alicuius dati arcus, idem est & sinus rectus secundus complemen-  
 ti dati arcus, sed non ipsius dati arcus.

Sinus rec-  
 tus secun-  
 dus comple-  
 menti.

Quod si eiusdem dati arcus sinum tam rectum primum & secundum,  
 quam uersum inuenire oportet, sinum quidem rectum primum inuenies  
 iuxta monstratam rationem, ut gradus accipias in fronte Canonis, scrup-  
 ula in sinistro margine. Itaq; dati arcus 40. gradus 36. scr. ut BC sinus  
 rectus primus colligitur 6507742, ut CE. Verum ut eiusdem dati ar-  
 cus sinum rectum secundum, ut CH, inuenias, quære numerum gradu-  
 um in calce Canonis, & scrupula in margine dextro. Itaq; offeret se dati  
 arcus BC sinus rectus secundus. Vt CH, 7592713. Hunc si auferas a se-  
 midiametro uel toto sinu, idest, ab 10000000, relinquetur sagitta, uel  
 sinus uersus BE. 2407287.

Sinus rec-  
 tus secun-  
 dus dati ar-  
 cus.

Sinus uer-  
 sus.

Sed si datus arcus non constat e solis gradibus & scrupulis primis, ue-  
 rum etiam secundis, adhibenda est usitata correctio per partem propor-  
 tionalē, quam, qui ex superiorib. nondū satis adsecutus est, discat ex sequen-  
 ti exemplo. Sit datus arcus graduū 40. scrup. 36. 24. cuius sinus inuenien-  
 dus est. Ingredientium 40. gradibus 36. offertur sinus 6507742, cui  
 adscripta est differentia 2208, qua sequens sinus graduum 40. 37. hunc  
 ipsum excedit, iam ut Venēris partem proportionalem, sic instituito ra-

2. Exempla  
 plur.

Pars pro-  
 portionem  
 portio-  
 nas-  
 lis.

γ 3



tionem calculi. 60. secundis scrupulis, quæ faciunt unum primum, debetur tota differentia 2208. quantum huius debetur scrupulis 24. Colliges autem partem hanc proportionalem 883. addendam sinui 40. grad. 36<sup>a</sup>, eo quod una cum arcub. subinde accrescunt ipsorum sinus. Erit igitur emendatus sinus 6508625. congruens grad. 40. scrupulis 36<sup>a</sup>. 24<sup>a</sup>.

5. P R A E C E P T V M. Dati sinus arcus inueniendus est

Ingressus  
arealis.

Vt antecedens præceptum laterali ingressu, ita hoc areali expediendum est. Sinum autem hoc loco potissimum intelligat studiosus de sinu recto primo.

Exemplū  
primum.

Secundum  
exemplū

Datum igitur sinum quære in area canonis, qui si penitus offertur, in capite canonis sursum accipies gradum, & extra ad sinistram scrupula prima. Vt sit datus sinus 6507742. cuius arcum inuenire oportet. Cum autem datus sinus in area penitus sese offerat, canon mox ostendit absque ulla emendatione arcum quæsitum, uidelicet, grad. 40. in capite, et in sinistro margine scr. 36. Pronuncio igitur datum sinum spectare ad gradus 40. 36<sup>a</sup>. Sed si datum sinum canon ipse non penitus habet, opus est parte proportionali, cuius rei exemplum breuiter subiicio, ne quis desideret. Vt sit rursus datus sinus 6508625. quem area non penitus exhibet. Sed proxime minorem ipso, scilicet hunc 6507742. respondentem grad. 40. 36<sup>a</sup>. ita ut inter hunc & datum sinum existat differentia particularum 883. Canon autem monstrat eo loco uni scrupulo primo uel 60. secundis competere 2208. particulas. Vt igitur secunda scrupula arcus quæ sit deprehendas, ita instituito calculum, 2208. particulis debentur 60. scrupula secunda, quot debentur particulis 883. Inuenies autem eis congruere scrupula secunda 24. ferè. Pronunciabis igitur datum sinum 6508625. spectare ad gradus 40. scrup. 36<sup>a</sup>. 24<sup>a</sup>.

De sinu recto  
secundo.

Quod si datum sinum dicat aliquis non esse rectum primum, sed secundum. Vt eius arcum addiscas, excerpito gradus in calce canonis, scrupula uero in margine dextro, adhibeas denique, si opus est, emendationem per partem proportionalem similiter, ut prius, nisi quod hic in constituenda differentia non sumes in canone sinuum proximè minorem, sed proximè maiorem, Ita eiusdem dati sinus 6508625. tanquam secundi, non primi erit arcus grad. 49. scr. 24<sup>a</sup>. 36<sup>a</sup>, quod exemplo indicasse, satis est in præsentia.

6. P R A E C E P T V M. Datis duobus lateribus, trianguli orthogoni rectilinei, reliquum inueniendum est.

Platonis.  
Symbolum

Et si triangulorum doctrina integra alibi traditur, sine qua nemini in-  
trospicere licet dulcissima illa Astronomiæ mysteria, sicut Platonis sym-  
bolum mouet, α' γεωμέτρης δ' εἰς εἶναι, tamen hoc loco communissima  
quædam



quædam de planis triangulis orthogonijs breuiter explicanda duxi, ut uerberrimus usus canonis sinuum et fecundi aliquo modo conspiciatur, et his initijs degustatis, generosæ naturæ inuitentur ad totum illius doctrinæ corpus cognoscendū. Pendet autem huius problematis tractatio ex demonstratione penultimæ propositionis primi elementorum Euclidis, quam græci scriptores inuentum esse tradunt summi Philosophi Pythagoræ. Quanc̃p uero græcis scriptoribus propter philosophiæ et eloquentiæ excellens studium, uenia nonnulla danda est, quod ad suæ gentis clarum & antiquum philosophum referunt inuentionem eius theorematis, quod in tota Geometria longe eminentissimum est, habetq̃ in rimandis astronomiæ secretis usum & maximum, & omnino necessarium: tamen cunctas mathematicas disciplinas longe antiquiores esse Pythagora, & reliquis claris in Græcia Philosophis, minime dubium est. Illud facile concedi potest, quod, quanc̃p hæ disciplinæ omnes Babylonijs et Egiptijs ex sanctorū patrum doctrina atq̃ consuetudine multis seculis anteq̃ Græci philosophi ceperunt, notæ fuerint, ac familiares: tamen quædam illustria uelut aximota harum disciplinarum non iniuriā referantur ad inuentorem Pythagoram, uel alios græcos Philosophos, siue, quia ipsi accepta à Chaldeis & Egiptijs sacerdotibus harum artium semina primi sparserunt inter suæ gentis homines, doctrinæq̃ illius authores extiterint, siue etiam, quia huius generis quædam ipsi sua sagacitate deprehenderint, non monstrata ab exteris. Sed redeo ad propositum.

Penultima  
primi libri  
euclidis.  
Inuentum  
pythagoræ.

Est autem illius Euclidei theorematis hæc sententia. In triangulis orthogonijs rectilineis quadratum descriptum à latere rectum subtendente angulum æquale est quadratis ambobus, quæ ex lateribus rectum includentibus describuntur. Vt in triangulo orthogonio ABC, cuius angulus ad C rectus, latera circa rectum angulum sint AC, & CB, rectum uero subtendens latus AB. Si iam latus AB latus rectum subtendens fuerit datum 5. longitudine, erunt iuxta Euclideum præceptum ambo quadrata ex AC. & CB, descripta 25. eo quod & quinarj quadratus est 25. Contra si laterum amborum BC, & AC circa rectum quadrata summam faciant 25. uelut si AC longitudine fuerit 3. & CB 4. quorum quadrata uel potentiæ 9. & 16. faciunt 25. erit & lateris AB quadratum. 25.

Sententia  
penultimæ  
illius Euclideæ.



Quomodo autem dato quolibet numero latus eius tetragonum, seu ut uulgo loquuntur, radix quadrata iuueniatur uel penitus, uel proxime, docent præcepta uulgaris logisticiæ.

Iam



**Præcepta.** Iam ex his fontibus geometricis manant hæc præcepta, quomodo dat  
**Datum la-** tis duobus lateribus orthogoni trianguli tertium inuenire oporteat. Vo  
**tus.** camus autem nunc datum latus, quod certo numero alicuius mensuræ  
 1 exprimitur. Nam si detur latus, rectum angulum subtendens, cum altero  
 ro laterum circa rectum, quadratum huius ablatum ex quadrato lateris  
 rectum subtendentis, relinquit quadratum quæsitæ lateris, ut si  $AB$  da-  
 tum fuerit 5. longitudine, cuius numeri potentia seu quadratus est 25.  
 &  $AC$  longitudine 3. cuius numeri quadratus 9. relinquitur quadratum  
 lateris  $CB$  esse 16. cuius latus tetragonum, uel radix quadrata ostendit  
 2  $CB$  longitudine esse quatuor. Vel si loco  $AC$  detur  $CB$  longitudine 4.  
 cuius quadratum est 16. relinquitur quadratum  $AC$  9. cuius latus tea-  
 tragonum rursus ostendit  $AC$  esse 3. longitudine. Sed si dentur ambo  
 latera circa rectum, quadrata eorum iuncta uel composita monstrant qua-  
 dratum reliqui lateris rectum subtendentis, ut si ambo latera circa rectum  
 $C$  dentur,  $AC$  quidem longitudine 3, &  $CB$  4. quorum quadrata sunt 9.  
 & 16. & summam 25. erit quadratum reliqui ac quæsitæ lateris  $AB$ , 25.  
 cuius tetragonum latus penitus est 5. longitudine. Ad hunc igitur mo-  
 dum datis utcunque duobus lateribus trianguli orthogoni rectilinei, terti-  
 um quoque latus dissimulatum minime latere potest.

7. **P R A E C E P T V M.** Si trianguli orthogoni duo dentur latera,  
 quorum alterum circa rectum est angulum, alterum uero subtendit  
 eundem, dabuntur etiam omnes eius anguli, &  
 reliquum latus.

Hoc præceptum monstrabit insignem & ualde gratum usum canonis  
 sinuum uel semissium subtensarum. Quare ut studiosus lector rursus  
 fontes teneat, ex quibus tractatio eius hauritur, ἀρχαί seu initia quædam  
 doctrinæ triangularis hic subiicienda sunt, & alia quædam prius decla-  
 randa, quam Geometricum ἀπόδειξις siue præceptum unâ cum exemplo  
 recitemus. Sunt autem ἀρχαί seu principia hæc.

**Amplitu-  
do anguli.**

1 Amplitudinem anguli rectilinei determinat comprehensus ab eo ar-  
 cus seu circumferentia eius circuli, qui super uertice anguli ipsius uelut  
 centro describitur.

**Datum la-  
tus.**

2 Datum latus dicitur, quod certo numero alicuius usitatæ uel notæ  
 mensuræ exprimitur.

**Latera in-  
uicem data.**

3 Latera seu rectæ lineæ inuicem dari dicuntur, quum numeri diserte  
 exprimuntur, iuxta quos eadem mensura utranque earum metitur.

**Datus an-  
gulus.**

4 Datus angulus dicitur, cum circumferentia uel arcus ab ipso compre-  
 hensus datur.

5 Datus

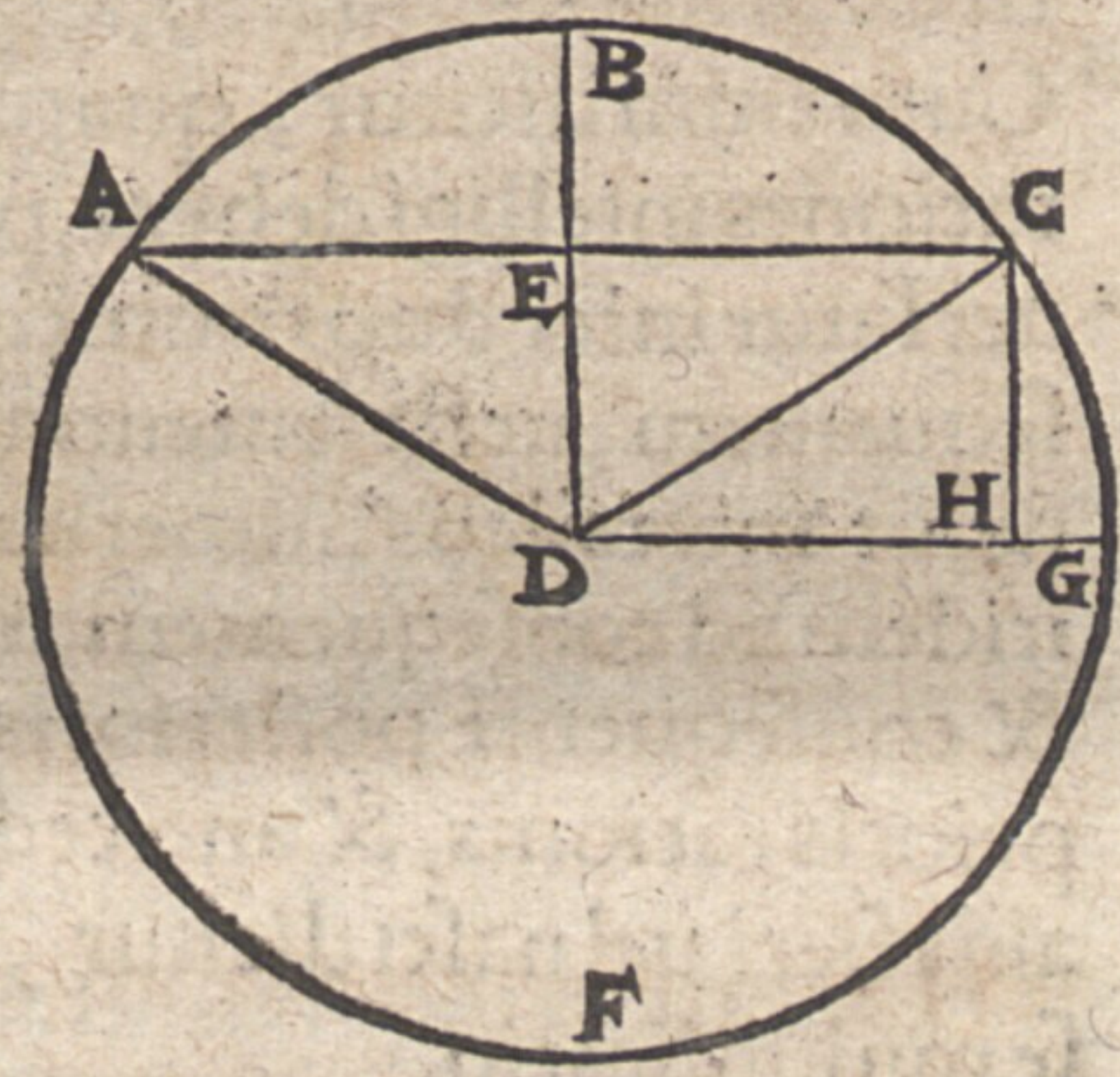


5. Data uero circumferentia uel arcus dicitur, cum partes eius trecentae sexagesimae diserte exprimuntur. Hoc enim ἀίτημα seu postulatū cumferentia. ἀίτημα astronomia cum. Astronomia, Totam circuli circumferentiam seu ambitum esse partium 360.

Ex quibus etiam intelligitur, rectum angulum per se datum esse, siquidem omnes recti sunt inuicem aequales, & quadrantem ambitus circuli, id est, 90. gradus intercipient, propterea quod quatuor rectis angulis ad centrum tota debetur circuli circumferentia.

6. Postremo datam rationem logista intelligit, quando uterque eius terminus, antecedens & consequens, certo numero eiusdem mensurae exprimitur. Data ratio.

Deinde meminerit studiosus, quod in triangulo orthogonio singula Orthogonij trianguli singula latera sinus etiam existant suorum angulorum, quibus subtenduntur. Id enim manifestissimum est, si super altera extremitate lateris recto subtensi, interualloque eiusdem lateris circulus describatur. Nam, ut breuitatis causa repetatur superius diagramma, in quo diximus DEC triangulum esse orthogonium, habens angulum ad B rectum, constat ex definitione, quae supra constituta est, CE, sinum esse arcus BC, qui quidem ipse arcus determinat angulum BDC ex definitione. Ideo latus CE simul est sinus anguli CDE. Similiter si centro C, interualloque CD circulus describatur, ostendemus DE latus simul etiam fungi munere sinus anguli ECD. Vel etiam sic ex hoc ipso diagrammate. Supra enim dictum est, latera opposita ED, & CH, ut in parallelogrammo esse aequalia, itemque angulos uicissitudinum seu ἐναλλάξ aequales ECD, & GDH. Est autem ex definitione CH sinus circumferentiae CG comprehensa ab angulo CDG, & propterea sinus etiam eiusdem anguli. Ideo DE duplici officio fungitur, quia & latus est trianguli DEC, & sinus anguli ECD. Quod autem latus recto subtensum angulo sinus etiam sit eiusdem, sic patet. Recto enim angulo congruit quadrans totius circumferentiae, Quadrantis uero sinus, ut supra diximus, semidiameter est circuli, quia tota diameter subtensa est semicirculi, id est, partium 180. latus denique trianguli recto subtensum fit ex hypothese semidiameter eius circuli, ad cuius circumferentiam trianguli latera sinus fieri intelliguntur.



Iam ex his illud etiam manifestum est, & anguli & arcus ab eo comprehensi, eundem esse sinum. Idem sinus est anguli

δ

Porro



et arcus ab  
eo compre-  
henfi.

Nihil uetat  
eandam li-  
neam diuer-  
fis numeris  
congruere

ob mensu-  
rarum uar-  
rietatem.

Fontes re-  
gulæ detri-  
seu potius  
quatuor nu-  
merorum  
proportio-  
nalem.

Multipli-  
catio.

1. 2. 3. 4.  
A. B. C. D.



Diuisio.

Porro sequentis præcepti ratio potissimum deinceps in eo consistit, ut ex ipsis lateribus dextre ratiocinemur particulas sinuum, & ex his rursum ipsa latera. Nam eadem linea magnitudine uarijs sese numeris accommodat propter mensurarum discrimina, quæ multa sunt, ut digitus, palmus, pes, spithame, cubitus, ulna, quam græci  $\rho\epsilon\gamma\mu\alpha\varsigma$  adpellant, denique aliæ infinitæ species mensurarum, quæ partim maiores sunt, partim minores his, quas enumeravi. Vt eadem linea potest esse 5. pedum, & rursum earum particularum, quas in canone sinuum usurpamus, alias aliter.

Ratiocinium autem, de quo iam dixi, gubernat usitata doctrinæ logicæ stices de quarto numero proportionali datis tribus. Quæ quidem doctrina, quomodo ex Euclidis fontibus deriuetur, fortasse non alienum est prius etiam breuiter hoc loco uel delibare. Nam integra & explicata ratio ex alijs scriptis uberioribus doctrinæ huius triangulorum petenda erit. Extat autem hoc præceptum Euclideum demonstratum decimo nono loco, septimi libri. Si 4. fuerint numeri in proportionem, numerus qui fit ex primo & quarto, æqualis est ei numero, qui fit ex secundo & tertio. Cum enim dicitur, quatuor numeros esse in proportionem, duæ omnino rationes intelligi debent, prior scilicet, & posterior, quælibet autem ratio uersatur inter duos numeros uelut extrema, nempe antecedentem & consequentem, ut sit sententia Euclidei præcepti. Cum fuerit in priori ratione, ut antecedens numerus ad consequentem, sic in posteriori, antecedens itidem ad consequentem, numerus qui fit ex antecedenti prioris rationis, & consequenti posterioris, æqualis est numero, qui fit ex consequenti prioris rationis, & antecedente posterioris. Numerus autem ex duobus alijs fieri uel nasci dicitur, quem gignit mutua eorundem duorum inter se multiplicatio.

Docet igitur hoc Euclideum præceptum, quod, quanquam tribus datis aliquando numeris, quartus in proportionem dissimuletur, tamen detur ille numerus, quem gignit mutua multiplicatio ignoti numeri, ac unius ex 3. datis, qui in altera ratione dissimiliter se habet. Vt si fuerint quatuor numeri A, B, C, D in proportionem, uidelicet A ad B, sicut C ad D, erit A. B. C. D. numerus, qui fit ex A & D, æqualis nimirum ei numero, qui fit ex B et C. Quod si iam desideretur uel primus A, uel quartus D, datis reliquis tribus, numerus tamen qui fit ex A & D, nequaquam ignoratur. Dissimiliter autem se habent hi duo numeri A & D, quia A est antecedens prioris rationis, D uero consequens posterioris. Similiter si uel B desideretur uel C, numerus tamen ex ipsis B & C natus minime latet.

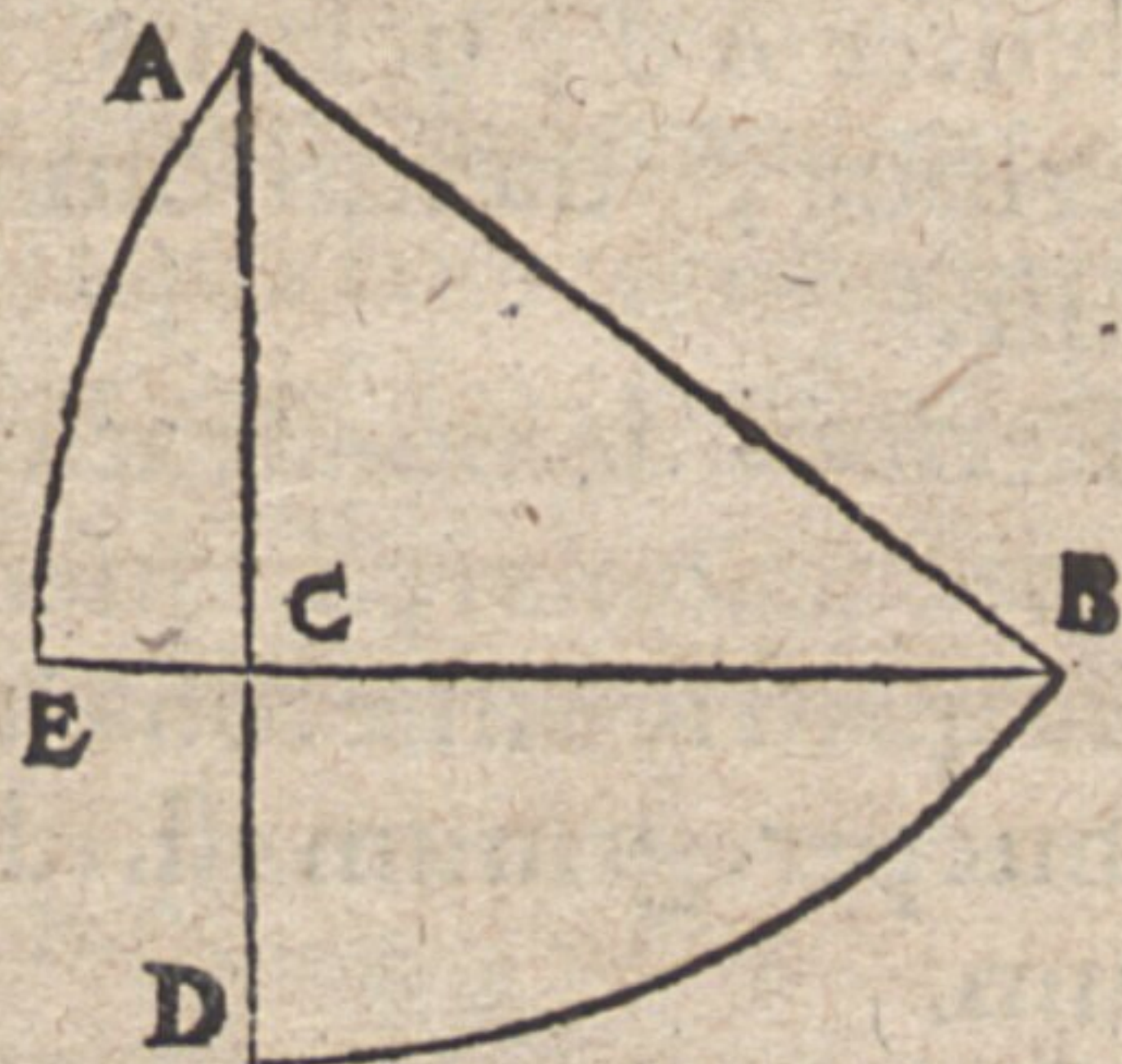
Postremo uero illud notissimum est, quod cum datur numerus ex duorum multiplicatione existens, quorum alter tantum datus est, hic ipse  
mox



mox prodit alterum. Si enim natus numerus diuidatur per ipsum, emergens e diuisione est ille dissimulatus numerus, qui unà cum dato minori, gignebat datum maiorem.

Videor autem nonnullis fortasse nimis procul euagari, præsertim cum tantum puerilia omnibusq; ferè notissima commemorem. Verum quia fontes ipsos monstrare cupio quàm simplicissime hīs, qui adspirant ad cognitionem doctrinæ triangulorum, studium meum boni consulet æquus & gratus lector. Redeo nunc ad propositum, ac recito  $\alpha\pi\omicron\delta\epsilon\lambda\epsilon\gamma\mu\alpha\tau\omicron\delta\epsilon\lambda\epsilon\gamma\mu\alpha\tau\omicron$  *geometrica*

Sit ergo triangulum orthogonium A B C cuius angulus ad C rectus, denturq; duo eius latera in eadem mensura, A B quidem recto subtensum angulo, sed B C subtensum acuto angulo B A C. Dico utrunq; acutorum angulorum B A C & A B C dari; ac insuper per latus A C. Rectus enim angulus per se datus est. Centro A, interualloq; A B maximi lateris recto subtensi, circulus describatur B D, similiter centro B, interualloq; eodem A B circulus describatur A E. Equales igitur sunt circuli B D, & A E, & arcus B D determinabit magnitudinem anguli B A C, arcus uero A C magnitudinem anguli A B C per 1. definitionem, eritq; latus C B, simul etiam sinus arcus B D comprehensi ab angulo B A C, & latus etiam A C sinus arcus A E comprehensi ab angulo A B C, ex definitione sinus supra constituta. Et quoniam duo latera A B, & B C, data sunt inuicem uel in hīsdem partibus, ideo per definitionem datæ rationis, ipsorum laterum A B & B C ratio datur. Et datur etiam A B latus, tanquàm sinus recti anguli per se, uidelicet totus sinus. Tres igitur numeri dati sunt, scilicet A B, & B C ut latera trianguli in uulgari quadam mensura, & rursum A B, ut sinus, & quidem totus, cui idem numerus particularum perpetuò congruit iuxta datum canonem. Estq; eadem ratio A B ad B C tanquàm lateris ad latus, quæ est ratio eiusdem A B ad idem B C, tanquàm sinus ad sinum (Earundem enim magnitudinum manet eadem semper ratio, utcunq; alios atq; alios numeros interim induant, iuxta mensurarum uarietatem) Datis autem tribus numeris, quartus etiam in proportionem per 9. septimi elementi datur, qui est consequens posterioris rationis. Ideo datur etiam B C latus tanquàm sinus, nempe ipsius arcus B D. Ac per 5. antecedens præceptum nostrum dati sinus, arcus etiam datur ex canone.



δ 2 Datur



Datur igitur arcus  $BD$ , hoc est, angulus  $BAC$ . Datur inde etiam reliquus acutus angulus  $ABC$ , quippe complementum quadrantis uel unius recti, siquidem in omni orthogonio rectilineo, duo anguli præter rectum unietiam recto sese æquant per 32. primi Element.

Et quoniam angulus  $ABC$  datur, hoc est arcus  $AB$ , datur igitur ex canone sinus quod præius per 4. præceptum nostrum. Vtruncque igitur latus  $AB$ , &  $AC$  datur in iisdem particulis, uidelicet, ut sinus. Datur igitur laterum tanquam sinuum ratio ad inuicem, ac præterea idem  $AB$  datur ex hypothesis, ut latus. Tribus igitur datis numeris  $AB$ , &  $AC$  quidem ut sinibus, itemque  $AB$  ut latere, datur rursus per 19. septimi, quartus etiam numerus uidelicet  $AC$ , ut latus. Proinde in orthogonio triangulo datis duobus lateribus, dantur omnes anguli & tertium latus, quod demonstrare libuit.

Recitavi demonstrationem aliquanto prolixius, ne qua particula argumentationis relinqueretur obcurior. Scio autem huiusmodi geometrica quasi sybillæ folia uideri ijs, in quorum auribus hoc sermonis genus adhuc peregrinum est. Ideo prolixæ demonstrationis, accipe breue exemplum.

**Exemplum.**

Sit in orthogonio triangulo  $ABC$ , cuius angulus ad  $C$  rectus, latus quidem  $AB$  talium 5. qualium  $BC$  latus 4. Ratio igitur lateris  $AB$  ad  $BC$ , latus est sicut 5. ad 4. Latus insuper  $AB$  recto subtensum, ut totus sinus est ex nostro canone particularum 10000000. Quare per 19. septimi Elem. latus etiam  $BC$  datur, ut sinus circumferentiæ  $BD$  particularum, scilicet, 8000000. Est enim, ut 5. ad 4. sic 10000000. ad 8000000. Cum igitur iam datus sit sinus circumferentiæ  $BD$ , datur per 5. præceptum nostrum ex canone ipsa quoque circumferentiæ  $BD$ , partium 53. 7' 4" 8", angulus nimirum  $BAC$ . Huius uero complementum ad quadrantem circuli est part. 36. 7' 2" 12", angulus scilicet alter acutus  $ABC$  id est arcus  $AB$ . Cuius sinus etiam per 4. præceptum datur ex canone particularum 6000014. Vnde etiam rursus per 19. septimi datur  $AC$  latus 4. Est enim ut 10000000, ad 6000014. sic 5. ad 4. uel etiam ut 8000000. ad 6000014. sic 4 ad 3.

**Summa præcepti.**

Summa igitur præcepti hæc est. Latus alterum circa rectum multiplica per 10000000. & emergentem numerum partire per latus recto subtensum. Exibit enim sinus anguli, cui latus illud subtenditur. Ex sinu autem dabitur etiam arcus eius per 5. præceptum, qui arcus determinat dictum angulum. Huius inde complementum ad quadrantem circuli, indicabit etiam alterum acutum angulum, cuius sinus rursus datur per 4. præceptum. Hunc sinum si multiplices per numerum lateris recto subtenso, & emergentem numerum diuidas per totum sinum, exhibit alterum latus circa



circa rectum. Ad hunc modum inuenta habebis omnia quæ sita.

8. P R A E C E P T V M. Quæ ratione conditus sit foecundus canon, & condendus integer canon doctrinæ triangulorum.

Et si otiosum ac superuacaneum uideri potest, rationem tradere condendi huius canonis, qui iam nostro non paruo labore, tibi optime lector, ad singula totius quadrantis scrupula exhibetur, tamen quia in hoc opere passim non usum modo nostrorum canonum docemus, uerum etiam quorundam constructionem, nihil hac etiam re alienum facimus ab instituto. Nam cum errata facillime irrepant in huiusmodi canones numerorum, pauci uero suo pte ingenio sine præceptore animaduertant rationem compositionis, prodest eam hic monstrari, ut si qua forte errata inciderint, dextre ex ipsis fontibus, quoties usus flagitat, emendari possint. Accedit deinde & hæc maxima utilitas, quod huius rei scientia fontes etiam simul apperit sequentis præcepti, quod insignem usum huius foecundi canonis exponet.

Sit igitur rursus orthogonium triangulum  $ABC$ , cuius angulus ad  $C$  rectus. Manifestum est ex 32. primi Ele. reliquos duos acutos ad  $A$  &  $B$  angulos uni etiam sese recto æquare, ita ut dum angulus ad  $A$  intelligitur esse unius partis, angulus ad  $B$  sit partium 89. quia 1. & 89. sunt 90. quot nimirum partes uni recto competunt tota circuli circumferentia distributa in partes 360. ut prius dictum est. Quod si angulum  $A$  sumas duarum partium circuli, erit angulus  $B$ . 88. partium, & sic consequenter per totum circuli quadrantem, etiam in scrupulis partium. Vt si cogites angulum  $A$  unius tantum esse scrupuli primi, erit alter acutus  $B$ , partium 89. scrupulorum 59. Ita enim rursus ambo anguli 90. gradibus siue uni recto sese æquabunt. Ad hunc igitur modum instituas duos numerorum contiguos  $C$  lines per totum circuli quadrantem propagatos, quorum alter exhibeat angulum  $A$ , crescentem ab initio quadrantis ad finem eius, alter uero angulum  $B$ , paulatim rursus decrescen-  
tem siue à fine eius redeuntem ad principium. Numeri uero, ita sint  $\epsilon\pi\alpha\nu\theta\epsilon\iota\varsigma$  collocati, ut cuique angulo  $A$  suus respondeat angulus  $B$ , tanquam recti anguli complementum. Postea singulis arcibus ex canone sinuum sui adscribantur sinus, ut patet ex subiecta tabella. Hoc pacto habebis tri-  
um laterum orthogoni trianguli inter se rationes per integrum circuli qua-  
drantem, ita scilicet ut quocunque modo acuti in eo anguli uariantur, in



Rationes  
triangulorum  
orthogonorum



In eisdem tamen particulis dentur latera circa rectum, quibus particulis  
 subtendens rectum datur 10000000. quæ iuxta nostrum canonem interea  
 grum sinum absoluunt. Verbi gratia, quarum in dicto orthogonio A B C  
 latus A B est 10000000. & B C 174524. earundem & A C 9998477. id  
 quod fit, dum angulus A adsumitur unius partis, angulo B interea exi-  
 stente partium 89. Similiter quarum eadem A B 10000000. et B C 348995.  
 earum A C 9993908. dum angulus ad A duarum partium reliquo ad B  
 partium 88. Ac eodem semper modo alia atque alia magnitudine assump-  
 tis angulis A & B, latera quidem circa rectum, ut sinus ipsorum similiter  
 variantur, sed A B subtendens rectum, ut magnitudinem, ita & numerum  
 seruat eundem iuxta canonis rationem. Verum alia res est in hoc fecun-  
 do canone, qui eundem perpetuo numerum attribuit non lateri rectum  
 subtendenti, sicut canon sinuum, sed uni laterum circa rectum, eo quod ex  
 hac hypothese data tantum ratione laterum circa rectum, ambo etiam ac-  
 cuti anguli miro compendio sese offerant, uel absque noticia tertii lateris,  
 quod tertio subtenditur. Adsumitur autem ille perpetuus numerus ad  
 imitationem totius sinus in eisdem particulis 10000000. ut multiplicatio-  
 nis & diuisionis munus in huius generis calculo facillime, sineque omni  
 animi intentione administretur.

Ratio seu  
 doctrina  
 compositio-  
 nis.

Iam uel ex his, quæ commemorata sunt hactenus, satis adparet ratio  
 compositionis. Cum enim ex canone sinuum ratio detur lateris A C  
 ad C B, ut cunque anguli A & B uariantur, dabitur per 19. septimi Elem. la-  
 tus etiam B C in eisdem particulis, quib. A C semper adsumitur 10000000.  
 Si enim numeros B C singulos multiplices in adsumptum numerum, quod  
 fit, si 7. thecæ singulis illis adiciantur, productum autem porro diuidas  
 in congruentem numerum A C, inuenies numerum reponendum in eum  
 locum areæ fecundi canonis, qui locus debetur arcui, angulum ad A de-  
 terminanti. Vt si 174524. sinum anguli A unius gradus, ita, ut dixi,  
 multiplicatum diuidas per 9998477. sinum 89. graduū, colliges 174551  
 qui numerus collocatur in fecundo iuxta unum gradum. Similiter si  
 348995. sinum anguli A duorum graduum ita multiplicatum partiariis  
 in 9993908. habebis hunc numerum 349207. collocandum iuxta 2. gra-  
 dus in fecundo. Vel si 9998477. sinum 89. gradum multiplicatum per ad-  
 sumptum numerum distribuas in numerum 174524. qui sinus est unius  
 gradus, habebis numerum hunc 572899830. collocandum iuxta 89. gra-  
 dus fecundi canonis. Ad hunc igitur modum, canon & compositus est,  
 & quoties usus postulauerit, emendari deinceps poterit.

Utilitas fec-

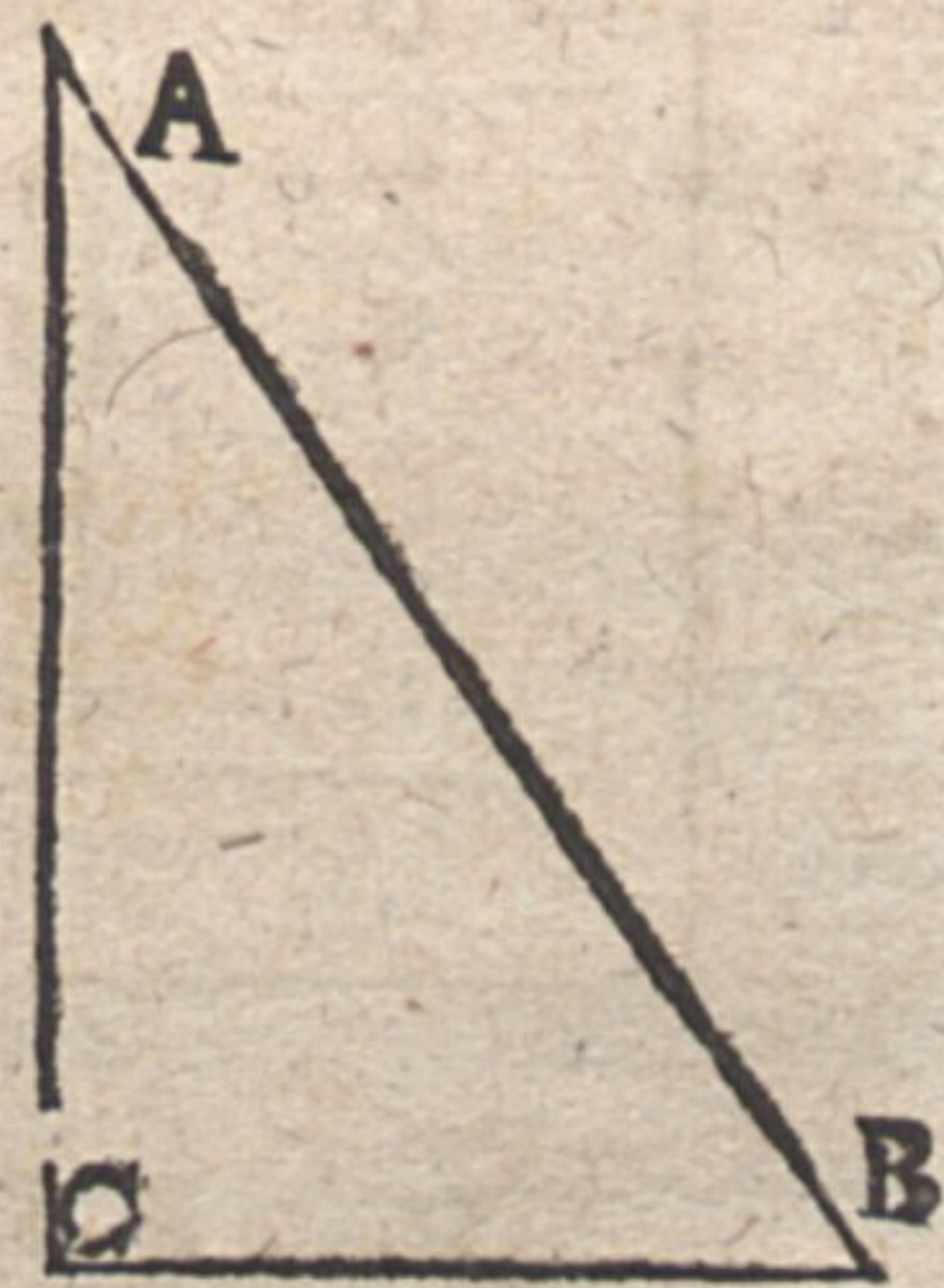
Quantum uero compendii in tractandis planis triangulis adferat hic  
 fecundus



fecundus canon, bona ex parte docebit sequens præceptum. Habet uero *fecundi ca-*  
 usum etiam in sphaericorum triangulorum tractatione, quoties accidit, *nonis.*  
 ut duo concurrant sinus, quorum arcus simul uni quadrantæ circuli æqua-  
 les sunt, id quod prudens lector ex sequentibus aliquo modo intelliget,  
 & nos prolixè *καὶ γραμμτικῶς*, deo iuvante, alibi ostendemus.

Reliquum est, ut studiosus lector paucis hic etiam admoneatur, quid *De integro*  
 addendum sit huic fecundo canoni, ut nihil ei desit, quin una cum sinu *canone do-*  
 um canone ad omnem usum universæ doctrinæ triangulorum, tum pla- *doctrinæ tri-*  
 norum tum sphaericorum sit accommodatus. Nam sinuum quidem ca- *angulorū.*  
 non, quomodocumq; etiam acuti duo anguli pares uni recto, inter se ua-  
 rientur, semper tamen, ut dictum est, trium inter se laterum orthogoni  
 trianguli rationes exhibet, ita ut latus recto subtensum, unum eundem-  
 que numerum constanter seruet, ut particularum 10000000. At fecun-  
 dus canon non exhibet omnium trium laterum inter se rationes, sed duo-  
 rum tantum, quæ sunt circa rectum, quorum alterum adsumit similiter  
 esse particularum 10000000. Quare ut fiat iam integer canon doctrinæ  
 triangulorum, addendum est tertium latus, recto subtensum in iisdem  
 particulis adsumpti numeri. Id autem hoc modo efficies, si eundem ad-  
 sumptum numerum 10000000 in sese multiplicatum, diuidas in singu-  
 los sinus totius quadrantis, redeundo a fine eius ad principium. Verbi  
 gratia, Diuidendus hic perpetuus est 1000000000000000. Quod si diui-  
 forem facias 9998477. qui est sinus 89. graduum, emerget numerus par-  
 ticularum earundem 10001523. congruens lateri rectum subtendenti.

Itaq; in orthogonio A B C quarum A C adsumitur  
 10000000, earum C B existit 174551. & A B 10001523.  
 dum angulus A unius partis esse intelligitur. Quod si  
 diuisorem facias sinum 88. graduum, 9993908. emer-  
 gent particulæ 10006096. Itaq; rursus in triangulo  
 A B C quarum A C sumitur 10000000, earum existit C B  
 349207. & A B 10006096. dum angulus A duarum  
 partium intelligitur. Sed omitto plura exempla com-  
 memorare.



Vnum tamen adhuc monendus est studiosus lector, quod integer ca- *Integer ca-*  
 non doctrinæ triangulorum tripartitus sit. Ant n. latus recto subtensum *non doctri-*  
 adsumitur particularum 10000000, aut maius latus circa rectum, aut *ne triangu-*  
 minus circa eundem. Prima huius canonis pars contextitur ex canone *lorum tri-*  
 sinuum, quæ ultra 45. gradus non adsurgit, eò quod duo acuti anguli *partitus.*  
 uni recto æquales sunt. Hinc enim fieri necesse est, ut quanto unus eo-  
 rum minor fuerit 45. gradibus, tanto vicissim alter maior existat,  
 fitq;



fitq; post semissem quadrantis magnitudinis acutorum angulorum per-  
mutatio. Reliquas autem duas partes suppeditat noster foecundus abso-  
lutus, quæ similiter, ut prima pars, desinunt in 45 gradum. Ideo autem  
canon sinuum unam tantum partem suppeditat, foecundus autem duas,  
quia ille lateri eidem rectum subtendenti perpetuo tribuit particulas  
10000000. hic uero totidem particulas tribuit aliàs maiori lateri circa re-  
ctum, aliàs minori, id quod prolixius declarare nihil attinet, præsertim  
cum iam in promptu sit hic canon, æditus à summo artifice Ioachimo  
Rhetico, qui si usum eius præceptis illustrauerit, ut spem fecit, magnum in  
mathematicis nomen habebit ad posteritatem.

TABELLA continens exempla præcepti huius.

| Angulus<br>A                                        | Latus<br>BC    | Angulus<br>B | Latus<br>AC | Latus<br>BC   | Latus<br>AB         |
|-----------------------------------------------------|----------------|--------------|-------------|---------------|---------------------|
| Gradus                                              | Qualium<br>est | Gradus       | AB 10000000 | Qualium<br>AC | iam est<br>10000000 |
| 1                                                   | 174524         | 89           | 9998477     | 174551        | 10001523            |
| 2                                                   | 348995         | 88           | 9993908     | 349207        | 10006096            |
| 3                                                   | 523360         | 87           | 9986295     | 524078        | 10013724            |
| 4                                                   | 697565         | 86           | 9975640     | 699268        | 10024419            |
| 5                                                   | 871557         | 85           | 9961947     | 874886        | 10038198            |
| 6                                                   | 1045285        | 84           | 9945219     | 1051043       | 10055082            |
| 7                                                   | 1218693        | 83           | 9925461     | 1227845       | 10075098            |
| 8                                                   | 1391731        | 82           | 9902681     | 1405408       | 10098275            |
| 9                                                   | 1564345        | 81           | 9876883     | 1583845       | 10124651            |
| 10                                                  | 1736482        | 80           | 9848078     | 1763269       | 10154265            |
| Et sic deinceps, donec circuli quadrans compleatur. |                |              |             |               |                     |

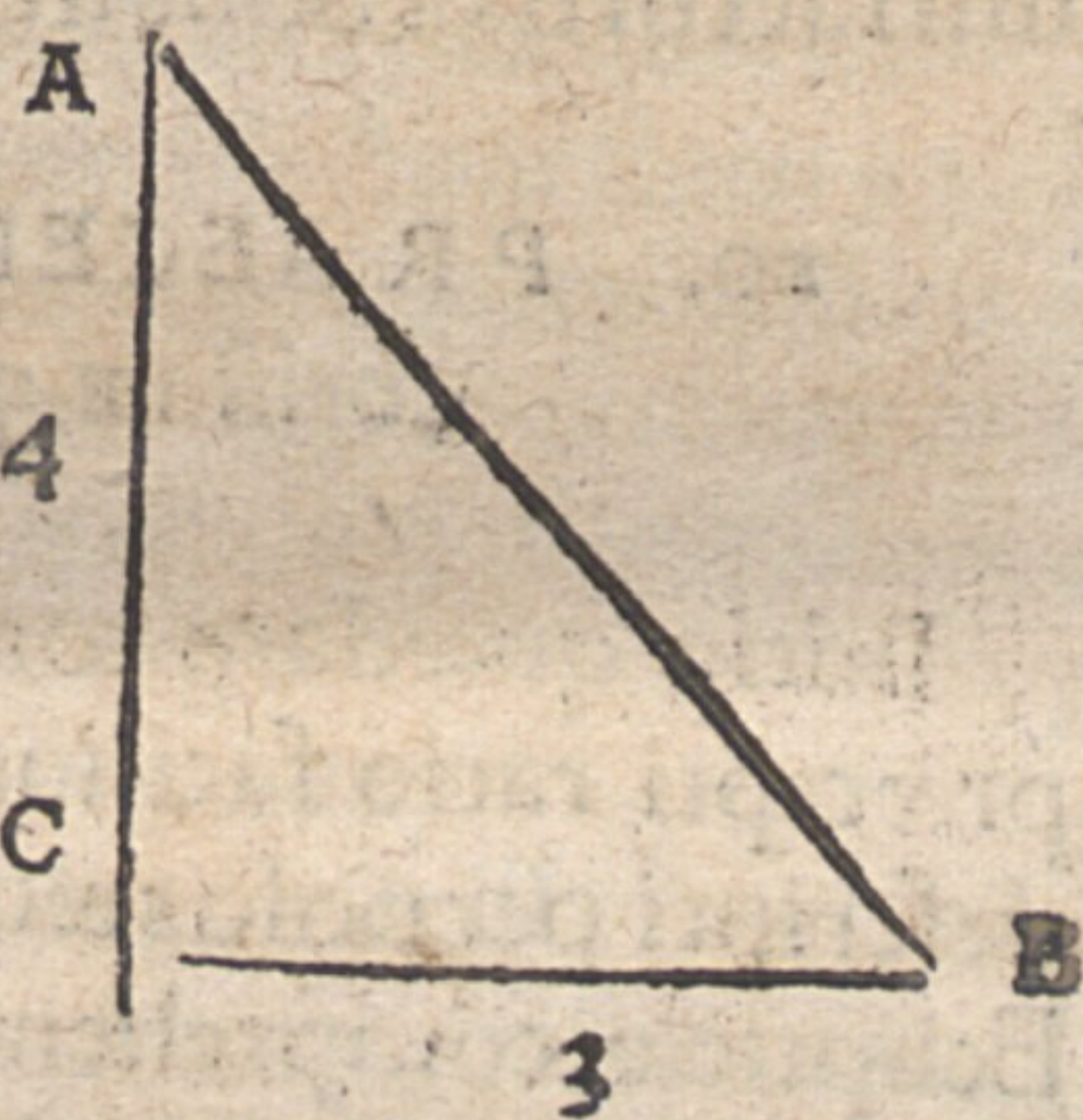
9. P R A E C E P T V M. In triangulo rectilineo, datis duo-  
bus lateribus circa rectum, datur uterque acutorum an-  
gulorum, itemq; latus recto subtensum.

Insignis u-  
sus foecun-  
di canonis. Fontes huius præcepti arbitror ab attento lectore, qui uel primoribus  
labris attrigit elementa Geometriæ, satis perspicere posse ex præcedentibus.  
Quare præceptum ipsum breuiter recito. Cum autem foecundus canon  
alterum ex datis lateribus perpetuo subiiciat particularum 10000000.  
alterum



alterum uero congruens priori iuxta angulorum rationem in area super **Præceptum.**  
 peditet, ideo duobus orthogonijs trianguli datis lateribus, alterum eorum  
 facito antecedens, alterum consequens. Inde numerum consequentis late-  
 ris multiplicatum per illum perpetuum numerum ad sumpti lateris de-  
 inde per numerum antecedentis. Ex hac enim partitione nascetur nume-  
 rus, qui inter areales fecundum canonis omnino inuentus, ostendit gradus  
 directe in capite, in latere uero sinistro scrupula prima. Alioqui enim si  
 non penitus inueniatur, adhibenda est iuxta usitatam doctrinam pars  
 proportionalis, quæ præter gradus & prima scrupula, secunda etiam in-  
 dicabit. Iam hi gradus & scrupula determinant eius anguli magnitudi-  
 nem, cui consequens latus subtenditur. Huius uero anguli complemen-  
 tum ad quadrantem circuli est magnitudo alterius acuti, cui antecedens  
 latus subtenditur, quod ad particulas 10000000, accommodabamus.  
 Vt aut latus etiam recto subtensum deprehendas, alterius acutorum an-  
 gulorum sinum multiplicatum in totum sinum diuide in ipsum latus ei-  
 dem acuto subtensum. Ita enim offeret se quæsitum latus, cuius noticia  
 adhuc desiderabatur.

**¶** Repetatur uerbi grati proximū orthogonium **A**  
**A B C** habens angulum ad **C** rectum, et **A C** earum 4.  
 quarum **C B** 3. Iam si **A C** latus feceris antecedens &  
**B C** consequens, ternarius inde numerus cōsequen- **4**  
 tis multiplicatus per 10000000, si diuidatur in 4.  
 efficit **C B** particularum 7500000, quarum **A C** an-  
 tecedens latus adsumptum est 10000000. Ingres- **C**  
 sus autem fecundum canonem hunc numerum **C B**  
 particularum 7500000. non prorsus inuenio, sed  
 proxime minorem ipso, scilicet 7499117, cui arcus respondet partium  
 36. 5' 2. Differentia autem utriusque numeri 7500000, & 7499117. est 883.  
 cumque canon ostendat eo loco congruere uni scrupulo primo uel 60. se-  
 cundis particulas 45. 46, ideo iuxta 19. septimi El. particulas 883. congrua-  
 unt ferè 12. scrupula secundæ. Angulus igitur **A**, cui latus **B C** consequens  
 subtenditur, gradus amplectitur 36. 52'. 12'. Huius complementum gra-  
 duum 53. 7'. 48'. est amplitudo alterius acuti anguli **B**, cui latus anteces-  
 dens **A C** subtenditur. Sinus autem partium 53. 7'. 48' per 4. præceptum  
 colligitur 7999989. At recti anguli, cui latus **A B** subtenditur, totus sinus  
 est, scilicet 10000000. Estque sinus anguli **B** ad sinum anguli **C**, ut latus **A C**  
 ad latus **A B**. Quare cum latus **A C** detur 4, inuenies per 19. septimi latus  
**A B** earundem 5. Quod eodem modo sequitur ex sinu anguli **A**, & latere  
**C B**. Quod si **B C** fecisses antecedens, et **A C** cōsequens, fuisset **A C** 13333333.  
 quarum



**Exemplum.**



quarum CB. adsumptum 10000000. Inde angulum B subtensum lateri consequenti AC deprehendes rursus partium 53. 7. 4" 8. & cætera inde similiter, ut prius.

Itaq; alia iam ratione nobis inuentum est latus recto subtensum, quàm supra docuimus ex penultima primi Euclidis. Verum aliam insuper rationem aliquanto breuiorem suppeditat integer canon doctrinæ triangulorum, quam nunc uolens omitto.

**Quomodo uterq; acutus angulus monstratur per unum acutum eundem numerum a realem.** Illud uero hoc loco non erat silentio prætereundū, quod quoties fecundum canonem ingrederis ex latere uenaturus angulum, si quidem gradus sursum & scrupula sinistrorsum acceperis, collectus arcus iudicabit magnitudinem eius acuti anguli, cui ipsum latus subtenditur. Sin uero gradus deorsum & scrupula dextrorsum, indicabit alterum acutum, qui attingit ipsum latus.

Hactenus generalia præcepta tradidi, quæ tamen non in his tantum, sed plæriscq; alijs etiam astronomicis canonibus usui esse possunt. Nunc ad ea accedo, quæ proprius pertinent ad huius operis *πραγματεῖα*, initium facturum à Solis stellarumq; cæterarum declinatione.

10. **P R A E C E P T U M.** Data parte zodiaci & anno ante uel post Christum, quomodo congruens ei declinatio inueniatur.

**Declinatio solis uel stellæ.** Initio quædam commemoranda sunt admonendi lectoris gratia, ut præcepti ratio facilius intelligatur. Declinatio est arcus circuli maximi descripti per polos æquinoctialis circuli & per datam stellam, uel partem Eclipticæ, comprehensus inter eandem uel stellam uel partem, atq; circum æquinoctialem. Hic arcus ab arctoa uel notia plaga, in quam scilicet uergit ab ipso æquinoctiali, sortitur suam adpellationem.

**Maxima ☉ declinatio seu obliquatio mutabilis. Eratosthenes. Ptolemæus.** Deinde sciat etiam lector maximam ☉ declinationem non manere immotam, sed paulatim uariari progressu temporis, ac differentiam extremarum declinationum complecti duas quintas unius gradus, siue scrupula prima 24. Non enim proditum literis extat, quod maxima solis declinatio aliquando gradus 23. scrupulaq; 52. superarit: ac consentaneum est non minorem fore gradibus totidem, scrupulisq; præterea 28. Nam Eratosthenes & Ptolemæus ipsum 350. annis fere post secutus suam uterq; ætate deprehenderunt eam præter 23. gradus scrupulorum 51. cum triente, ac uerisimile est medio tempore 52. scrupula prima fuisse expleta. Nostri uero temporibus deprehenditur, præter integros gradus totidem scrupulorum primorum fere 28, & continua iam obseruatione summorum



summorum artificum per annos fere 100. eadem animaduersa est prope-  
modum sine ulla mutatione, quemadmodum in circularibus motibus fi-  
eri solet circa extremas & oppositas tropas seu conuersiones.

Porro mutatio maximæ obliquitatis solaris conuenienter uariat sin-  
gularum etiam partium cuiusq; quadrantis signiferi declinationes. Nam  
illud quidem in primis Elementis sphericis traditur, quod in quatuor zo-  
diaci quadrantibus, quos distinguunt puncta æquinoctialia et solstitialia,  
eadem sit ratio declinationis singularum inter se partium, hac scilicet lege,  
ut habeant æquales declinationes duorum contiguum quadrantum aci.

partes æqualiter remotæ à medio puncto, quod si æquinoctiale est, par-  
tes illæ uocantur Ptolemæo præcipientes, ut in semicirculo boreali, &  
obedientes, ut in semicirculo australi, sed si medium punctum fuerit tro-  
picum, partes illæ nuncupantur à Ptolemæo sese mutuo uidentes, & æ-  
quipollentes, Firmico autem sunt antistia.

Postremo sciat lector, quod noster canon obliquationis exhibeat deno-  
rum scrupulorum totius quadrantis signiferi declinationes eas, quæ con-  
gruunt declinationi minimæ earum, quæ sunt maximæ, idest partium 23.  
scrup. 28'. adiecto tamen ubiq; excessu, quem alias conuenit totum adiun-  
gere, ut in maxima omnium declinatione, alias uero partem eius tantum  
scrupulis proportionalibus congruentem, quæ scrupula subtilissime  
quidem colligi possunt ex canone prosthaphæreseon æquinoctiorum in  
tabulis nostris Prutenicis. Verum ut hæc ipsa essent in promptu, nec pe-  
tenda longius, adiunxi huic præcepto canonem monstrantem illa scrupu-  
la ad annos 1780. ante Christum & post Christum ad annos usq; 1652,  
qui canon sine magno negotio propagari potest ulterius, uel ad tempora  
antiquiora, uel secutura, si hic mundus tam diu duraturus est.

His ita explicatis, præcepti ratio facilima est. Cum dato enim loco ☉  
ingredere canonem obliquationis partium signiferi lateraliter, sic ut uel  
dodecatemorion sursum accipias, & gradus cum suis scrupulis sinistror-  
sum, uel dodecatemorion deorsum, & gradus eiusdem cum scrupulis  
dextrorsum, secutus enim præcepta superiora de ingressu laterali & par-  
te proportionali colliges in angulo communi loci Eclipticæ declinatio-  
nem cum sequenti excessu, quem totum adiunges ipsi declinationi, si scru-  
pula proportionalia fuerunt 60. uel partem illius excessus, quæ congruit  
scrupulis proportionalibus, subiectus autem canon monstrat scrupula  
proportionalia, ad datos annos ante uel post Christum.

8 2 Verum

Quatuor  
quadrantibus  
zodiaci

δωκεται  
τημορια  
προσδρα-  
σονται

ακροντα  
βλεπον-  
τα

ισοδυα-  
μεντα  
αντιστοι-  
χια  
Excessus.  
Pars pro-  
portionalis.

Præceptum.



**Exemplū  
comple-  
ctens om-  
nem præ-  
cepti uari-  
etatem.**

Verum exemplo accipe omnem præcepti uarietatem. Inueniendum est, quantum ab æquinoctiali declinet 5. pars 33' scrupula dodecatemori  $\gamma$ . Ingressus igitur canonem cum dato arcu zodiaci, uideo 5. partibus 30. scrupulis  $\gamma$  congruere declinationem partium 13. scr. 22'. 14". estq; diffe-  
rentia descendens scrupulorum 3'. 20", quæ debetur 10. scrupulis pri-  
mis proximis à tricesimo uidelicet proficiscendo in quadragesimum.  
Pars inde proportionalis tribus scrupulis primis congruens est scrupulo-  
rum 1'. 0", addenda, quia declinatio porro accrescit. Itaq; partes 5. 33'  
 $\gamma$  declinant ab æquinoctiali partib. 13. 23'. 14". in minima uidelicet ob-  
liquitate  $\odot$ , quanta fere est nostro sæculo, & fuit ante Christum annis  
1800 ferè. Rursum excessus congruens dictis partibus & scrupulis  $\gamma$  sit  
mili ratione colligitur scrupulorum 13'. 9", qui totus additur in maxia-  
ma  $\odot$  obliquitate, quanta nimirum fuit annis 64. ante initium Christi.  
Idcirco eo tempore, cum essent scrupula proportionalia 60. totus hic ex-  
cessus adiungendus erat ad inuentam declinationem, ita ut colligeretur 5.  
pars 33'. scr.  $\gamma$  declinasse tunc partib. 13. 36'. 2" 3. ab æquinoctiali. Sed  
tempore Albategnii, ut circa annum Domini 885, ut docent sequentes ta-  
bellæ, non totus excessus adñciebatur, uerum pars tantum, quæ scrupu-  
lis 25. proportionalibus congruit, uidelicet scrupula 5'. 29". ferè. Alba-  
tegnii igitur tempestate 5. partes 33' scr.  $\gamma$  declinabant ab æquinoctiali  
partibus 13. 28'. 33".

**Canon ob-  
liquationis  
sine parte  
proportio-  
nali qua-  
drat no-  
stro sæcu-  
lo.**

Porro hic monendum duxi Logistam, ad nostram ætatem satis con-  
gruere canonem obliquationis  $\odot$  simpliciter, ac neglecto excessu partecp  
eius proportionali, eo quod hoc anno Christi 1552. scrupula proportio-  
nalia sunt 0'. 30', post annos 100. planè nihil futura, ut proximum cano-  
nion indicat. Sed si quis delectatur curioso calculo, componat peculiarem  
canonem huius ætatis, sicut sequens præceptum docebit.

Nunc tabellam scrupulorum proportionalium subiñcio accommoda-  
tam ad annos ante & post Christum, & inde rursus tabellam complecten-  
tem nonnulla historia de quibusdam insignibus rebus & artificib. Astro-  
nomicis ante & post Christum, ut facilius sit usus tabellæ scrupulorum.



# CANONION scrupulorum proportionalium.

| Scrupula  | ANNI      |           | Scrupula  | ANNI      |           | Scrupula  | ANNI      |           |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|           | Ante      | post      |           | Ante      | post      |           | Ante      | post      |
| proporti. | Christum. | Christum. | proporti. | Christum. | Christum. | proporti. | Christum. | Christum. |
| 60        | 64        |           |           |           |           |           |           |           |
| 59        | 207       | 79        | 39        | 755       | 627       | 19        | 1127      | 999       |
| 58        | 264       | 136       | 38        | 774       | 647       | 18        | 1147      | 1019      |
| 57        | 312       | 184       | 37        | 793       | 665       | 17        | 1167      | 1039      |
| 56        | 350       | 222       | 36        | 812       | 684       | 16        | 1187      | 1059      |
| 55        | 384       | 256       | 35        | 831       | 703       | 15        | 1208      | 1080      |
| 54        | 416       | 288       | 34        | 849       | 721       | 14        | 1229      | 1101      |
| 53        | 445       | 317       | 33        | 867       | 739       | 13        | 1251      | 1123      |
| 52        | 472       | 344       | 32        | 885       | 757       | 12        | 1274      | 1146      |
| 51        | 498       | 370       | 31        | 904       | 776       | 11        | 1297      | 1169      |
| 50        | 523       | 395       | 30        | 922       | 794       | 10        | 1320      | 1192      |
| 49        | 546       | 418       | 29        | 940       | 812       | 9         | 1345      | 1217      |
| 48        | 569       | 441       | 28        | 958       | 830       | 8         | 1372      | 1244      |
| 47        | 592       | 464       | 27        | 976       | 848       | 7         | 1400      | 1272      |
| 46        | 615       | 487       | 26        | 995       | 867       | 6         | 1429      | 1301      |
| 45        | 636       | 508       | 25        | 1013      | 885       | 5         | 1460      | 1332      |
| 44        | 657       | 529       | 24        | 1032      | 904       | 4         | 1494      | 1366      |
| 43        | 677       | 549       | 23        | 1051      | 923       | 3         | 1533      | 1405      |
| 42        | 697       | 569       | 22        | 1070      | 942       | 2         | 1580      | 1452      |
| 41        | 717       | 589       | 21        | 1089      | 961       | 1         | 1638      | 1510      |
| 40        | 736       | 608       | 20        | 1108      | 980       | 0         | 1780      | 1652      |

## HISTORICA tabella memorabilium rerum gestarum & euentuum.

CHRISTVS filius Dei æterni patris natus est homo anno mundi 3962. Ideo annus ante Christum 1780. est à condito mundo 2182. annus. Quod tempus paululū antecessit mors SEM patriarchæ, & hoc ferme tempore Iacob a patre Isaaco secedens in exilium fugit fratrem suum Esau. Collocant etiam docti circa hæc tempora Atlantem regem Mauritanix fratrem Promethei, cum filio Hyante, item Orione, qui acceptam ab Atlante doctrinam de motibus cœlestibus primus intulit in Græciam.

6 3 Ante



| Ante Christum                                                   | Annis. |
|-----------------------------------------------------------------|--------|
| Lex promulgata.                                                 | 1509   |
| Excidium Troiæ                                                  | 1182   |
| Templū Salomonis absolutū                                       | 1029   |
| Initium Olympiadum                                              | 775    |
| Initiū conditæ urbis Romæ                                       | 751    |
| Primus Nabomassar Ptolemaici<br>.i. Salmanassar                 | 747    |
| Initium captiuitatis Babylonice,<br>uel destructio templi Salo. | 606    |
| Primus Cyri regis Persarum                                      | 536    |
| Alexandri Magni obitus                                          | 324    |
| Concilium Nicenum                                               | 324    |

Philosophi & artifices insignes.

| Ante Christum                                                                                                                 | Annis. |
|-------------------------------------------------------------------------------------------------------------------------------|--------|
| Orion fere.                                                                                                                   | 1708   |
| Chiron circa Troiana tempora                                                                                                  |        |
| Homerus post captam Troiam<br>obiit anno 172, autore Solino,<br>sed iuxta Herodotū floruiſſet<br>post Troiam captā, annis 168 |        |
| Hesio. in ipsiſ auspicijs primæ<br>Olympiad. obiit autore Solino                                                              |        |
| Thales Myleſi 9. tempor. Cyri.                                                                                                |        |
| Pythagoras Samius mortuus<br>olympiade                                                                                        | 70     |
| Methon Atheniēſis floruit olym-<br>piade 86. tempore belli Pelopo.                                                            |        |
| Endoxus, Plato, Architas Tarēti-<br>nus coætani paulo ante Alexā.                                                             |        |
| Calippus coætaneus Alexādrī au-<br>tor periodi 76. annorum                                                                    |        |
| Timochares et Euclid. coætani sub<br>Ptolemæo Philadelpho                                                                     | 290    |
| Aratus qui scripsit φαινόμενα                                                                                                 | 280    |
| Aristarchus Samius                                                                                                            | 261    |
| Eratosthenes & Archimedes                                                                                                     | 215    |
| Hipparchus quem Arabici ſcrip-<br>tores uocant Abrachin                                                                       | 126    |
| Strabo geograph⁹ sub Augusto.                                                                                                 |        |

| Post Christum                                               | Annis.    |
|-------------------------------------------------------------|-----------|
| Constantinopolis reſtituta                                  | 334       |
| Roma capta ſub Honorio à Gotthis                            |           |
| Roma capta à Vandalis                                       | 456. (412 |
| Roma tertio capta à Gotthis et uan-<br>ſtata ſub Iuſtiniano | 548       |
| Initium regni Mahometici                                    | 630       |
| Primus annus Caroli magni                                   | 801       |
| Ottonis primi ſeu Magni                                     | 938       |
| Inſtitutio Electorum Imperij                                | 1002      |
| Alphon. diuiſiō tabularū Afr.                               | 1252      |
| Initium potentie Turcicæ                                    | 1300      |
| Capta Constantinopolis                                      | 1453      |

| Post Christum                                                                                     | Annis. |
|---------------------------------------------------------------------------------------------------|--------|
| Marinus geographus                                                                                | 60     |
| Theodoſius cuius extant ſphærica<br>ferè                                                          | 130    |
| Ptolemæus ſummus artifex                                                                          | 140    |
| Proclus cuius extant hypotiſeſes a-<br>ſtronomicarū hypotheſiū ferè                               | 280    |
| Iulius Firmicus ſub Conſtantino                                                                   | 320    |
| Theon cuius commentarij extant in<br>Eucl. & Ptol. ſub Valentiniano et<br>Theodoſio Imperatoribus | 370    |
| Cleomedes                                                                                         | 427    |
| Albumaſar                                                                                         | 844    |
| Albategni⁹, Mahomet. Arate.                                                                       | 880    |
| Arzahel hiſpanus autor tabularum<br>Toletanarum.                                                  | 980    |
| Campanus Philoſophus                                                                              | 1033   |
| B. Michael Pſellus philoſoph⁹                                                                     | 1107   |
| A Almeon & Azaphi                                                                                 | 1050   |
| C. Abraham Auenefre.                                                                              | 1145   |
| Alpetragius autor cōcētricorū                                                                     | 1156   |
| Prophatius Iude⁹, et Thebi⁹                                                                       | 1208   |
| Haliabenragel                                                                                     | 1202   |
| Alkind.                                                                                           | 1235   |
| Vitellio Opticus & Guido Bonatus                                                                  |        |
| & Guihelmus de S. Glodialdo                                                                       | 1290   |
| Georgius Purbachius mortu-<br>us                                                                  | 1462   |
| Eius                                                                                              |        |



Eius coætaneus Iohannes Blanchinus.

Et discipulus Iohannes Regiomontanus repurgator artis.

11. **PRAECEPTVM.** *Qua ratione ad quamvis mundi ætatem iustus obliquationis seu declinationis solaris canon construendus sit.*

Sagax quidem lector contentus præcedenti præcepto non admodum desiderabit longiorem ea de re orationem: sed aliorum tamen gratia breuiter subiicio præceptum cum exemplo. Dato igitur anno ante uel post Christum ex præcedenti canonio primum addisces scrupula proportionalia, deinde his scrupulis uide quanta pars de singulis differentiis in obliquationis solaris Canone congruat. Hac enim parte ubique suis locis adiecta declinationi comparabis nouum obliquationis canonem conuenientem dato tempori. Verbi gratia, finis primi gradus dodecatemorii V, ex canone declinat in minima ☉ obliquitate ab æquinoctiali parte 0. scr. 23'. 5" 3. cum differentia scr. 0'. 2" 3. quibus plus declinat in maxima ☉ obliquitate. Sint iam ad datum quoddam tempus scrupula proportionalia 25. His igitur scrupulis de differentia scrupulorum 0'. 23" congruunt scrupula 9". 35"', uel 10", quæ adiecta parti 0. scrupulis 23' 5" 3. efficiunt ueram declinationem primæ partis V partis scilicet 0. scr. 24'. 3". dū scrupula proportionalia existunt 25. Ita habes initium noui canonis. Item ex nostro canone obliquationis secundus gradus V declinat ab æquinoctiali parte 0. scr. 47'. 46", cum differentia scr. 0'. 4" 6. de quibus pars congruens 28, scrupulis est scrupulorum 19'. 1" 0. quæ adiecta rursus parti 0. 47'. 46" efficiunt similiter ueram declinationem duorum primorum graduum V, partis 0. scr. 48'. 5". Ad hunc modum si per singulos gradus, uel etiam per dena scrupula cuiusque gradus perrexeris, non magno labore comparabis nouum canonem obliquationis solaris dato tempori ante uel post Christum conuenientem, Vt, quia antecedens canonio ostendit 25. scrupula competere annis 885. post Christum, & annis 1013. ante Christum, quorum alterum tempus est ædificati templi Salomonis, alterum uero Albategni, ideo nouus hic canon obliquationis tua industria supputatus utriusque ætati prorsus deseruiet.

12. **PRAECEPTVM.** *Data maxima ☉ obliquatione, ad quod Eclipticæ punctum dati quadrantis spectet data declinatio.*

Datam maximam ☉ obliquationem hic accipimus, quæ uel simpliciter datur, uel cuius tempus, aut scrupula proportionalia dantur iuxta Canonion

Quid data ☉



maxima  
obliquatio.

Canonion decimi præcepti. Ideo autem præceptum hoc mentionem facit  
dati quadrantis zodiaci, quia cum semper quatuor zodiaci puncta ean-  
dem usurpent declinationem, quæ parî interuallo distant ab alterutro  
puncto uel æquinoctiali uel solsticiali, præscire oportet quadrantem zo-  
diaci, ad quem data declinatio referenda est. Ac intelligimus nunc qua-  
drantes zodiaci, quos eadem ipsa puncta æquinoctiorum et solsticiorum  
distinguunt.

TRES  
FORMÆ.  
Prima.

Porro præceptum hoc triplici forma expedire licet, quarum prima uel  
est facilima, ita Canonem prærequirit, quem antecedens præceptum da-  
ta maxima ☉ obliquatione docet componere. Hunc enim Canonem in-  
gressus cum data declinatione arealiter, ut uocant, uenaberis extra dati  
quadrantis dodecatemorion, cum gradibus ac scrupulis eiusdem. Nam si  
area canonis datam declinationem penitus offert, numerus eius in capite  
quidem, uel calce canonis monstrat dodecatemorion quadrantis, gradus  
autem & scrupula illius dodecatemorion in margine dextro, uel sinistro,  
prout dodecatemorion in capite uel calce canonis inuentum fuerit. Sin  
autem area non penitus offert datam declinationem, per numerum pro-  
xime numerum in area excerpe, ut iam dictum est, dodecatemorion qua-  
drantis cum gradibus & scrupulis suis, Deinde eundem proxime mino-  
rem confer tam ad contiguum maiorem, quam ad numerum datæ decli-  
nationis. Quærendus est enim iuxta usitatam doctrinam numerus, qui  
ita se habeat ad minorem differentiam, sicut decem scrupula ad maiorem  
differentiam, Et hunc inuentum numerum scrupulorum tum primo-  
rum tum secundorum semper adñcies ad prius inuenta scrupula annexa  
gradibus, ut exacte colligas gradus & scrupula inuenti dodecatemorion.  
Ac ne desit nobis exemplum, usurpemus sanè nunc canonem nostrum  
obliquationis partium signiferi, perinde ac si datæ maximæ solis obli-  
quationi penitus sit accommodatus. Propositum autem sit quærere, cui  
puncto uerni quadrantis zodiaci congruat declinatio partium  $13.23.14''$ . Primum in canone obliquationis datam declinationem partium  
 $13.23.1''4$ . non penitus inuenio, sed minorem proxime partium  $13$ . scr.  
 $22.1''4$ . cui competit in quadrante uerno quintus gradus, &  $30$ . scrup.  
pulum dodecatemorion  $\gamma$ . Eundem porro proxime minorem superat pri-  
mum contiguus in area sequens scrupulis  $3.2''0$ , deinde numerus datæ  
declinationis scrupulo  $1.0''$ . Denique iuxta regulam proportionum si-  
cut scrupulis  $3.20'$ . congruunt extra scrupula  $1.0''$ , sic scrupulo  $1.0''$ .  
congruunt scrupula  $3$ . prima, quæ addita  $5$ . gradibus. &  $30$ . scrupulis  
ostendunt datam declinationem partium  $13$ . scr.  $23.14''$ . congruere  $5$ .  
gradib.  $33$ . scrupul. dodecatemorion  $\gamma$ .

Altera



Altera forma semper eodem nostro canone obliquationis utitur, quæ *Secunda*  
 cunctæ etiam sit maxima ☉ declinatio, modo ut ex canonio decimi præces-  
 pri habeantur scrupula proportionalia. In area enim canonis inuenien-  
 dus est rursus numerus minor, data declinatione cum sua differentia,  
 hac lege seu observatione, ut pars de hac differentia congruens scrupulis  
 proportionalibus, si adijciatur eidem minori, efficiat numerum uel pa-  
 rem datæ declinationi, uel proxime minorem. Si quidem collectus nume-  
 rus par extiterit datæ declinationi, numerus minor prior extra monstrat  
 & gradus & scrupula dodecatemorii dati quadrantis. Sin autem minor,  
 hæc ipsa differentia comparanda est ad maiorem differentiam duorum  
 contiguorum numerorum, ac perficienda sunt cætera, ut in prima forma.  
 Exemplo fiet res illustrior. Sit data declinatio par. 13. scr. 2' 8.4" 3. ac quæ-  
 ratur, cui puncto uerni quadrantis ipsa congruat ad Albategni sæculum,  
 quo maxima ☉ obliquatio fuit fermè partium 23. scr. 3' 8, uel scrupula  
 proportionalia 25. Ac ingressus canonem obliquationis sumo partes non  
 13. scr. 2' 5.34", sed 13.22'. 14", cum sua differentia laterali scrupulorum  
 1' 3.8", de qua 25. scrupulis proportionalib. congruunt scrupula 5'. 2" 8.  
 ferè, quæ addita partibus 13.2' 2.14". faciunt partes 13. scr. 27'. 42", qui  
 collectus numerus proxime minor est data declinatione, scrupulis nimis  
 rum 1'. 11". At descendens differentia duorum contiguorum numero-  
 rum est scrupulorum, 3'. 20". Iam sicut scrupula 3'. 20". ad 10. scrupula  
 extra, sic scrupula, 1'. 11". ad scrupula 3'. 0". ferè, quæ adiungenda sunt  
 partib. 5'. 30". & quæ scilicet partib. 13. scr. 22'. 14". declinationis con-  
 gruebant. Sic tandem colliges datam declinationem quadrare partibus 5.  
 scr. 33'. dodecatemorii &.

Tertia forma tractatur per canonem sinuum. Sinum .n. datæ declina- *Tertia*  
 tionis, si multiplicaueris in totum sinum, ac diuiseris per sinum maximæ ob-  
 liquationis ☉, colliges sinum illius arcus, quo à proxima sectione æquis  
 noctialis & zodiaci distat quæsitum punctum, siue in consequentia, siue  
 in præcedentia. Vt ne discedamus à priori exemplo, quærat ad tem-  
 pus Albategni, cui puncto uerni quadrantis conueniat declinatio partis  
 um 13.2' 8.4" 3. Huius sinus est 2330826. Estq; maxima ☉ obliquatio  
 partium 23. scr. 28'. 0". cuius sinus est 4008821. Prior autem sinus mul-  
 tiplicatus per totum, ac distributus inde in hunc posteriorem, ostendit si-  
 num nouum 5814243, cui competit arcus partium 35. scr. 33' ferè. Tan-  
 tum distat quæsitum punctum uerni quadrantis à uerna sectione. Data  
 igitur declinatio partium 13. scr. 28'. 43" tempore Albategni competit  
 quinto gradui 33. scrupulo primo, &.



13 **PRAECEPTVM.** Data cuiusq; stellae longitudine ac latitudine,  
quomodo declinatio eius inuestigetur.

**Longitudo  
stellae.**

Longitudo stellae est arcus zodiaci, comprehensus inter locum ad pa-  
rentis uerni æquinoctij & circulum latitudinis stellae, h. e. circulum, qui  
per polos eclipticae describitur, & uerum ipsius stellae locum. Hic arcus  
longitudinis in stellis quidem errantibus seu planetis celerius mutatur,  
aliter tamen in alijs ob motuum periodicorum dissimilitudinem, tardius  
uero in stellis inerrantibus, & eodem quidem modo in omnibus, quia  
cum in una sphaera circumferantur, similes inter se positis constanter re-  
tinent, ac immutabiliter.

**Latitudo  
stellae.**

**Sol expers  
latitudinis.**

Latitudo est arcus circuli illius latitudinis, comprehensus inter uerum  
stellae locum & eclipticam, siue iter solare, quod Ptolemæus circulum  
nuncupare solet  $\sigma\iota\alpha\ \mu\epsilon\sigma\omega\mu\ \tau\omega\mu\ \zeta\omega\delta\iota\omega\mu$ . Etsi autem maxima  $\odot$  obli-  
quitas non immota manet, ut arbitrabatur Ptolemæus ac ueteres, sed  
longissimi temporis tractu paululum uariatur, ut docent posteriores  
observationes, tamen quia sol semper in oppositis zodiaci locis æquales  
seruat declinationes ab æquinoctiali, recte censetur expers esse latitudi-  
nis, ac solus errantium stellarum perpetuo eadem uia decurrere. Nam  
ab hoc rectissimo Solis curriculo tanquam à medio deus utrinq; itineris  
bus reliquæ sex errantes stellae euagantur, inerrantium autem stellarum  
quælibet rursus constanter suum seruat, ac eundem positum ad hoc iter  
solare. Iam ex his manifestum est, quod planetae quidem ex duplici causa  
subinde uariant suas declinationes, uidelicet quia tum in longum, tum  
in latum alias alia sortiuntur loca: at fixæ stellæ acquirunt & ipsæ alias  
declinationes, licet tardissime, propterea quod secundum longitudinem  
paulatim transeunt in alia loca, tametsi latitudinem seruent perpetuo im-  
motam ab orbita solari.

**Causæ cur  
mutentur  
stellarum  
declinatio-  
nes.**

**Scrupula  
proportio-  
nalia usum  
habent in  
hoc etiam  
præcepto,  
ac plerisq;  
sequentib.  
Data lon-**

Cæterum quia maxima  $\odot$  obliquatio habet mutationem, hac etiam  
de causa stellarum omnium declinationes subeunt aliquam uarietatem,  
quæ compendiosius excerpti ex canonibus non potest, nisi adhibitis ñs-  
dem scrupulis proportionalibus, quæ ipsa obliquationis mutatio nobis  
peperit. Nec solum in hoc generali calculo declinationis stellarum,  
uerum etiam in plerisq; alijs præceptis, quæ sequentur, ñsdem utemur  
scrupulis, quibus proxime emendabamus solis declinationem, quemad-  
modum patebit.

Data igitur longitudo stellae hic intelligatur is, quem dixi, arcus certo  
congruens temporis. Respondent autem cuiq; temporis sua scrupula pro-  
portiona-



portionalia iuxta canonem, quod decimo præcepto subiunximus. Cæ- *gitudo stel*  
terum quomodo ad quoduis datum tempus inueniatur datæ stellæ lon- *le.*  
gitudinis & latitudinis, petendum erit, si usus postulat, ex tabulis nostris  
Prutenicis.

Hæc præfari libuit admonendi studiosi lectoris gratia, cui prius etiam *Ratio seu*  
ratio canonis declinationum generalis aperienda est, quam præceptum *descriptio*  
recitetur. Primum igitur ut canon declinationis ☉ non transcendit qua- *partium*  
drantem circuli, sed a fine eius recurrit ad principium, ita hic etiam ca- *canonis.*  
non, ubi quadrantem circuli expleuit, eundem conuerso itinere ac retro-  
grado accommodat quadrantem proximo, donec iterato utroque cursu to-  
tius circuli ambitus absoluitur. Itaque sex dodecatemoria gestat in capite,  
tria scilicet uernalia, & tria autumnalia recto ordine, reliqua sex dodeca-  
temoria ostendit in calce, ut tria æstiuæ, & tria hiberna retrorsum. Item,  
ut prius, signis seu dodecatemorijs superioribus respondet sinister limes  
graduum & scrupulorum, inferioribus autem eorundem dexter limes.  
Area autem canonis duplices exhibet numeros, ut arcus, & multiplican- *In area ca-*  
dos. Arcus quidem est segmentum circuli latitudinis, de quo prius di- *nonis.*  
ctum est, comprehensum inter æquinoctialem & iter solare, quod seg- *Arcus.*  
mentum Regiomontanus noster satis commode adpellat radicem decli- *Radix de-*  
nationis, cui si uel adijcitur latitudo stellæ, uel aufertur, ut mox dicemus, *clinationis.*  
colligitur distantia stellæ ab æquinoctiali numerata in eodem circulo la- *Argumen-*  
titudinis. Hanc distantiam stellæ uocat Regiomontanus argumentum *tum decli-*  
declinationis. Numerus autem quisque multiplicandus est sinus illius ar- *nationis.*  
cus, qui determinat magnitudinem anguli comprehensi ab æquinoctiali, *Numerus*  
& eo ipso circulo latitudinis. Postremo utrisque numeris duplex adscripta *multipli-*  
est differentia, altera quidem descendens uel interiecta, congruens in mi- *candus.*  
nima solis obliquitate denis scrupulis, per quæ adsurgit canon, altera ue- *Duplex*  
ro lateralis seu adiacens, quæ ut in maxima ☉ obliquitate adijcitur to- *differētia.*  
ta, uel aufertur, ita alias pars eius duntaxat ea, quæ scrupulis pro-  
portionalibus debetur. Huic canonis descriptioni præceptum nunc  
subijcio.

Cum numero itaque longitudinis stellæ ingredi canonem lateraliter, *Præceptū.*  
dodecatemoria sursum uel deorsum accipiendo cum suis gradibus. et scrus-  
pulis in alterutro marginum, sicut dictum est, & facta emendatione usita-  
ta, excerpe ordine hæc quatuor, arcum uidelicet ac multiplicandum nu-  
merum cum suis lateralibus differentijs seu adiacentibus. Ex canone autem  
priori uenaberis scrupula proportionalia dato tempori, idest datæ longi-  
tudini stellæ, conuenientia. De utraque porro differentia cape partem

2 2 illis



illis scrupulis congruentem, quarum ea pars, quæ arcui adiacet, eidem semper adiungitur, contrā uero altera, quæ adiacet multiplicando, eidem subducitur, Cæterum arcus imitatur sui signi seu dodecatemoriū regionem ac plagam, ita ut per semicirculum signiferi borealem idem arcus habeatur borealis, & per australem semicirculum australis. Iam huic arcui adde stellæ latitudinem, si eiusdem fuerint adfectionis uel speciei, & habebis summam similem utriq; eorum. Sin fuerint diuersæ speciei, ubi minus abstuleris a maiori, reliquus arcus referet speciem eius, unde facta est subtractio. Nam si nihil reliqui faciet subtractio, stella expers declinationis omnino in æquinoctialis circuli plano uersabitur. Hoc igitur siue collectum siue residuum antea adpellauimus argumentum declinationis, cuius sinum inuenias iuxta 4. præceptum, eumq; multiplices in numerum multiplicandum. Vbi enim a producto numero abñcies 7. primas figuras uersus dextram (quæ uocatur diuisio per totum sinum) habebis sinum declinationis stellæ, Ideoq; per 5. præceptum arcus declinationis quæsitæ cognoscetur, quæ qualis sit borea uel notia, monebit prioris summæ uel residui adfectio.

Exemplū  
Canicula,  
αιγλος.

Verum exemplis præceptum fiet illustrius. Stella igitur quam latini Caniculam, græci αἰγλος adpellant, hoc anno 1552. distat a uerno æquinoctio gradibus 98. scrup., 37'. 37'', id est, tenet partem 8. scr. 37'. 37''. dodecatemoriū ☿, Latitudo eius austrina partium a Ptolemæo annotata est 38. 10'. Sunt autem hoc anno, ut prius dixi, scrupula proportionabilia 0'. 3" 0. eò quod nunc maxima ☉ obliquitas circa minimum extremū uersetur. Per longitudinem igitur stellæ excerpo iuxta doctrinam initio traditam hoc ordine, arcum scilicet partium 23. 13'. 4" 7. Differentiam eius lateralem scrupulorum 23'. 4" 9. cum titulo additionis, Numerum multiplicandum 9982144. & differentiam eius adiacentem 579. cum titulo subtractionis. Nam litera A additionem, S subtractionem indicat. De differentia igitur laterali ipsius arcus pars ea, quæ scrupulis 0'. 3" 0. congruit, est scrupulorum 0'. 12. ferè, quæ adiecta gradibus 23. 13'. 4" 7. efficiunt absolutum arcum partium 23. scr. 13'. 59'', qui ob dodecatemoriū ☿ boreale etiam censetur borealis. At quia latitudo stellæ australis est, aufer ab ea priorem arcum ut minorem, & relinquetur adhuc australis arcus partium 15. scr. 5' 6. 1". quæ est distantia caniculæ ab æquinoctiali numerata, uidelicet in circulo latitudinis, Hoc est argumentum declinationis cuius sinus col. igitur ex canone 2745233. Similiter de altera differentia laterali 579. pars congruens scrupulis 0' 30". est tantum 5, quæ reiecta ex multiplicando numero, relinquunt iam absolutum 9982139, quem si in sinum iam inuentum multiplicaueris, recisus 7. primis figuris uersus



uersus dextram, habebis sinum quæsitæ declinationis, uidelicet 2740330. Ideo per 5. præceptum inuenies ipsam declinationem stellæ nostro tempore gradus 15. scr. 54. 1" 6, australem uidelicet, eò quod reliquus etiam ille arcus fuerat australis.

Cum autem nostro tempore scrupula proportionalia penè nihil sint, contra iacturam omitti possunt, eritq; calculus multo breuior. Mox enim inuentum arcum partium 23. scr. 13. 4" 7. auferes à latitudine stellæ partium 38. 1" 0, & reliqui arcus partium 15. 56. 13". sinum 2745742. multiplicabis in primo emendatum multiplicandum 9982144. Rursum enim colliges sinum quæsitæ declinationis 2740889. ac propterea ipsam declinationem stellæ partium 15. scr. 54. 2" 8, quæ à priori differt scrupulis duntaxat 12. secundis, quæ non iniuria neglexeris. Siquidem in uniuersum absoluto hoc & simili calculo secunda scrupula potes abicere, ita tamen, ut si plura fuerint quàm 30, primis scrup. prioribus, unitatem ipsorum uice adiungas. Vides igitur nullum esse usum differentiarum lateraliū seu adiacentium, si scrupula proportionalia uel omittantur, uel per se recedant in nihilum, ut fit nostra tempestate.

Adhuc autem plura exempla tum propter sequentia præcepta, tum uero ut utilitas nostrorum canonum magis intelligatur. Eiusdem igitur Caniculæ ante Christum annis 1322. longitudo est partium 56. scr. 54. 3" 3. latitudo uero, ut prius, part. 39. 1" 0 Australis, scrupula autem proportionalia 10. 0". Ex his datis iuxta eundem calculi tenorem offeretur stellæ declinatio graduum 18. 38. 39". australis, quadrans ferè temporibus Gedeonis Iudicis populi Israëlitici, uel ei anno, qui secundū M. Antonini Imperatoris antecedit annis 2460. idest, toto anno  $\kappa\upsilon\upsilon\iota\kappa\omega$ , quem Ægyptij in illa æquinoctiorum & solsticiorum instabilitate obseruarunt, ut postea dicemus.

Similiter eiusdem Caniculæ longitudo est partium 77. scr. 39. 55". ad annum domini 138. qui est secundus M. Antonini Imperatoris, scrupula autem proportionalia 58. 0". Ex his datis rursum existit stellæ declinatio graduum 15. scr. 44. 3" 8. australis.

Deinde Pleiadum sequens angustissimus terminus annis 1322. ante Christum longitudinem habebat grad. 12. scr. 54. 3" 3. latitudinem uero semper immotam ab itinere Solis parti. 5. 20'. borealem. Itaq; calculus ostendet tunc angustiss. illum terminū declinasse ab æquinoctiali gradibus 10, scr. 1. 20". in aquilonem.

Similiter post Christum annis 138, cum longitudo esset grad. 33. scr. 39. 55". declinasse gradib. 17. scr. 57. 7". Deniq; hoc anno 1552, cum longitudo illius constet e partib. 54. scr. 37. 37". declinare, colligitur grad. 24.

2 3 scr.

Canon de  
clinationū  
generalis  
absq; scrup  
ulis pro  
portional  
ibus satis  
commode  
seruit no  
stro seculo  
Secunda  
scrupula  
possunt o  
mitti tan  
dem.

2. Declina  
tio eiusdē  
caniculæ  
ante Chri  
stum annis  
1322.

3. post  
Christum  
annis 138.  
Pleiades.

1. ante  
Christum  
1322. an.

2. Post  
Christum  
annis 138



3. Nostro tempore. Si stella careat latitudine. De componendo canone obli-  
 scr. 6'. 4" 2. in septentrionem. Sed dicat aliquis, quæ calculi ratio tenenda erit, si stella prorsus careat latitudine? Expeditissimum autem est in hoc calculo reuerti ad canonem obliquationis solaris, quia stella tantisper, dum caret latitudine, in ipso plano Eclipticæ, h. e. solis itinere existit. Verum si omnino placet calculus operosior, uteris hoc ipso canone declinationum generali, perinde ut prius, nisi quod latitudine in nihilum abeunte arcui nihil addi potest, nec auferri, sed mox sinuseius usurpatur. Imo etiam si ingenuus labor tibi uoluptati est, potes hac ipsa ratione nouum obli-  
 quationis solaris canonem condere ad quoduis datum tempus. Quod monuisse satis est.



Postremo quanquam declinatio usitate numeratur ab æquinoctiali, sicut latitudo ab ecliptica, tamen huic canoni declinationum generali nomen fecimus declinationum æquinoctialis ab Ecliptica, eò quod arcus quilibet scriptus in eo segmentum est non circuli declinationis, sed circuli latitudinis. Id quod obiter etiam studiosi lectoris gratia adijciendum putauit.

#### 14. P R A E C E P T U M. Quomodo ad datum tempus condendus sit generalis canon declinationum.

Generalis canon declinationum. Generalem canonem declinationum uoco, qui promiscue seruit omnibus stellis errantibus & inerrantibus, qualis etiam noster canon est, cuius usus iam aliquo modo demonstraui, nisi quod nulli ætati proprie destinatus est, sed per scrupula proportionalia ad omnia tempora accommodatur. Quare ut condas canonem certo tempori ita seruientem, ut relictis scrupulis proportionalibus calculus sit extricator ac breuior, sic faciendum erit. Ex canone decimi præcepti cognoscas scrupula proportionalia isti ætati congruentia. Deinde in canone nostro declinationum generali de singulis differentiis lateralibus tam arcum quam multiplicandorum sume partes illis scrupulis congruentes, quas partes arcibus quidem suis addes, multiplicandis uero demes. Hoc pacto nouum efficies canonem declinationum generalem, congruentem illi tempori, cuius sunt illa scrupula proportionalia. Verbi gratia, initio canonis 10. scrupulis primi gradus V uel  $\frac{1}{2}$  respondet arcus parti 0, scr. 4'. 20". differentia lateralis scrupulorum 0'. 5". Numerus multiplicandus 9172928, denique differentia huius lateralis 28025. Sint iam scrupula proportionalia 12'. 0". quæ iuxta canonem superius congruunt fere anno 1274. ante Christum, & anno 1146. post Christum. De priori igitur differentia laterali



lateralis arcus scrupulorum  $0'.5''$  congruunt 12 scrupulis tantum scrupula  $0'.1''$ . quod adiectum arcui part.  $0.4'.20''$  efficit arcum reponendum in nouum canonem eodem loco partium  $0.4'.21''$ . Similiter de posteriori differentia, 28025 pars congruens 12 scrupulis est 5605 particulae rum, quæ reiectæ ex multiplicando 9172928. relinquunt multiplicandum reponendum in nouum canonem 9167323. Eodem modo retextes totum nostrum canonem, donec ad quadrantis totius exitum peruenias.

15. **PRAECEPTVM.** Quomodo ad datum tempus canon declinationis stellæ non excedentis 8. gradus latitudinis condendus sit, qui declinationes stellarum, errantium & inerrantium, in zodiaco expeditius suppeditet ac sine calculi molestia.

Canonem hic intelligo, cuiusmodi Regiomontanus in opere suo Directionum primo loco exhibuit, qui etsi maximam  $\odot$  obliquitatem adsumit graduum 23. scr. 30'. quæ nostra ætate duobus penè scrupulis minor est, tamen satis commode nunc etiam usurpari potest. Verum si quis uolet ad alia data tempora eundem canonem constituere, aut omnino etiam ad nostra tempora aliquanto scrupulosius, huic rationem eam ex nostris canonibus monstrandam censemus.

¶ Primum igitur, ubi ad datum tempus canonem declinationum generalem condidisti, iuxta doctrinam præcedentis præcepti, adde singulis arcibus primo unum gradum, & collectorum arcuum sinus ubiq; adscribe. Inde hos sinus singulos totius quadrantis multiplicato in multiplicandos, & cætera perage, ut prius docuit præceptum XII. Ita enim habebis partem canonis absolutam, quæ exhibebit per integrum semicirculum declinationes stellarum: boreales quidem, dum per semicirculum signiferi borealem latitudo stellæ borealis unius gradus adsumitur, australis uero, dum per semicirculum eiusdem signiferi australem eadem latitudo unius gradus uersus austrum ab Ecliptica adsumitur. Puncta enim cœli, quorum tum æqualis est latitudo, tum æqualis seu longitudo seu distantia ab eodem signo tropico, similiter declinant. Puncta uero ex diametro sibi opposita, quorum æquales sunt latitudines, sed dissimiles, declinationes item nanciscuntur æquales, sed dissimiles.

Porro



2 Porro si isdem arcubus duos gradus adieceris, postea 3. ac inde consequenter usque ad 8. gradum (uel quousque progredi libuerit) contexes canonem declinationum borealium per semicirculum borealem, & australium per australem.

¶ Rursum uero, si a singulis arcubus pari ordine abstuleris primo unum gradum, postea 2. inde 3. gradus, donec ad præstitutam metam 8. uel plurimum graduum ascenderis, aut minorem saltem arcum reieceris ex maiori, ut supra traditum est, iustumque calculi tenorem sectatus fueris, pertexes reliquam partem canonis declinationum, nempe australium per semicirculum borealem, & borealium per semicirculum signiferi australem.

Sagaci autem lectori ac industrio, cui hæc scribimus, unicum suffecerit exemplum, ut in nostro canone declinationum generali è regione decimi gradus V uel  $\Delta$  adscriptum uides arcum partium 4. scr.  $18^{\circ}.4'0''$ . & numerum multiplicandum 9198946. pro ea obliquitate  $\odot$ , quæ maxima & minima est, uidelicet partium 23. scr.  $28'$ . Iam si huic arcui addideris unum gradum, erit collecti arcus partium 5. scr.  $18^{\circ}.40''$ . sinus 925637. Hinc iuxta doctrinam prius traditam habebis sinum declinationis 85:488, ac propterea ipsam declinationem graduum  $4.53'.4''$ . fere, quæ est borealis quidem, dum stellam cogitas in 10. gradu V, uel 20.  $\text{III}$ . cum latitudine unius gradus boreali, Australis uero dum eandem cogitatione collocas in 10. gradu  $\Delta$  uel 20.  $\text{X}$  cum latitudine similiter unius gradus australi.

Compendia non omnia præceptis traduntur. Alia forma.

Cæterum in huiusmodi canonibus condendis multa sunt compendia, quæ præceptis omnia comprehendere non possunt, sed usu potius discenda sunt, qui est omnium artium magister. Itaque sagax lector & ab alijs tradita recte percipiet, & multa per se animaduertet, dum manus operi admo-uebit. Nam illud Anaxagoræ uel maxime huc quadrat, Manum esse sapientiæ causam.

Illud tamen pro mea fide non possum dissimulare, quod si multiplicandum tanquam sinum in arcum suum commutaueris per 5. præceptum, & iam cum hoc ipso arcu & altero collecto uel residuo (quem argumentum declinationis uocauimus) ingressus fueris canonem primi mobilis Regiomontani nostri, uno tantum ingressu laterali mox ipsam declinationem uenaberis. Ita nec sinus querendus erit, nec post laboriosam multiplicationem, & diuisionem sinus rursus in arcum commutandus, ut quæsitum adsequaris.

Et hætenus quidem de stellarum ac quorumlibet cœli punctorum declinatione satis dictum esse arbitror. Nunc accedo ad alterum principale caput huius  $\pi\rho\alpha\gamma\mu\alpha\tau\epsilon\alpha\varsigma$  de ascensionibus, & descensionibus, id est, cum



cum quo puncto uel æquinoctialis circuli uel Eclipticæ quælibet stella  
emergat supra horizontem, aut infra eundem decumbat tum in recta  
sphæra tum in obliqua. Has græci scriptores uocant ἀναφορὰς καὶ κα- ἀναφορὰ  
ταφορὰς ἐπ' ὀρθῆς τῆς σφαῖρας, ἢ ἐγκλημένους. κατὰφο-  
ραι.

16. P R A E C E P T U M. Quomodo dati gradus Eclipticæ ascensio recta  
calculo eratur ad datum tempus.

Deinceps igitur aliquot præcepta tradenda erunt de ascensionibus ac  
prius quidem de rectis, quàm de obliquis, tum quòd canones obliqua-  
rum ascensionum propagentur ex canone rectarum, ut postea adparebit,  
tum uero maxime, quod doctrina rectarum ascensionum usum habet in  
omni sphæra. Nam meridianus circulus ubiq; terrarum rectæ sphærae  
suum imitatur, quia ut horizon rectus, ita quilibet etiam Meridianus per  
polos æquinoctialis circuli describitur, nec est ullus meridianus, quin  
aliquorum sub æquinoctiali habitantium rectus etiam horizon existat.  
Quare æquinoctialis circulus pariter & rectum horizontem & meridia-  
num secat ad rectos angulos sphærales per 19. primi Theodosij, & eadem  
ratione quæuis cœli puncta transeunt meridianum circulum, ut ascen-  
dunt in horizonte recto.

Prius autem dicendum est de ascensione recta cuiusq; puncti orbitæ So-  
lis, quam Ptolemæus uocat κηλὸν διὰ μεσῶν τῶν ὁρίων, Cleomedes κη-  
λὸν ἡλιακόν, ἢ ἐκλεπτικόν. Macrobius autem lineam Eclipticam. Po-  
stea uero de cuiusq; stellæ seu puncti in cœlo ascensione recta. Vtemur  
enim diuersis canonibus, in quorum utroq; tamen ascensiones numeran-  
tur ab altera utriusq; circuli, æquinoctialis inquam & obliqui, communi  
sectione, quæ ab æquinoctio eius temporis anni uerna nuncupatur, &  
principio dodecatemoriæ primæ seu V. adscribitur. Qua in re summi arti-  
fices omnibus ætatibus priscam illam primorum nostrorum parentum  
consuetudinem secuti sunt, qui anni quoq; initium semper deduxerunt à  
uerno æquinoctio, uel potius à nouilunio, quod illi proximum erat, ut  
explicatur alibi.

Meminerit ergo primum logista, omnes canones ascensionum in recta  
ac obliqua sphæra propagari à uerna sectione uelut à perpetuo principio,  
sed tamen certa calculi ratione, quæ postea tradenda erit, undecunq; de-  
riuari posse.

Deinde & hoc sciat, nullas ascensionum canones ἡσδὲμ locis seu regio-  
nibus constanter seruire, imò alijs temporibus congruere alios canones,  
totamq; hanc uarietatem ad mutationem maximæ obliquationis solaris  
accommodatam esse. Itaq; etsi canon noster ascensionum in sphæra re-  
cta proprie seruit minimæ Solis obliquationi, quæ non est maior par-  
tibus 23.



tibus 23. scr. 28', tamen singulis numeris ascensionum adiunctus est sursum  
excessus, qui in maxima Solis obliquatione totus quidem subtrahitur  
per quadrantem signiferi uernum & autumnalem, additur uero per reli-  
quos duos quadrantes. Maximus uero excessus fit circa 17. partem  $\delta$  &  
m, & circa 13.  $\Omega$  &  $\approx$ , qui non superat scrupula 5. 16''.

**Præceptū.**

Hæc prius commemoranda erant, ex quibus iam præcepti ratio non  
obscura est. Cum dato enim arcu canonem ascensionum in sphaera recta  
propagatum ad dena scrupula, ingredi lateraliter, iuxta præcepta &  
exempla superiora, ac excerpere iustam ascensionem, itemq; excessum eius  
cum titulo additionis uel subtractionis. Habeas præterea ex canone scrupu-  
lorum, quem decimo nostro præcepto adiunximus, scrupula propor-  
tionalia proposito temporis conuenientia, quibus capito de excessu par-  
tem congruentem, quam si uel addideris uel abstuleris arcui ascensionis,  
habebis absolutam ascensionem rectam dati arcus Eclipticæ ad datum  
tempus, deductam uidelicet continua serie ab initio V siue uerna sectio-  
ne. Verbi gratia. Ad hæc nostra tempora scrupula illa proportionalia  
sunt 0'. 30''. Sit autem quærenda ascensio recta arcus Eclipticæ desinene-  
tis in partem 6. scrupulum 35  $\delta$ . Secutus ergo superiora præcepta  
uideo gradibus 16. scr. 35. respondere ascensionem quidem rectam tem-  
porum 44. 6'. 40'', excessum uero scrupulorum 6'. 16'', de quo excessu  
scrupulis proportionalibus 0'. 30'. competunt scrupula 0'. 3''. fere au-  
ferenda, ut in quadrante uernali. Erit ergo absoluta ascensio recta dati  
arcus temporum 44. scr. 6'. 37''. Vel temporum 44. scr. 7' abiectis nimirum  
secundis. Cæterum quia nostra tempestate scrupula proportionalia rede-  
unt in nihilum, hic canon ascensionum satis commode usurpatur etiam  
omisso excessu & parte eius congruente. Nam in hoc calculo ferme ubiq;  
absoluto calculo secunda scrupula neglexeris.

*μῶραι.  
χρόνοι.*

Postremo, partes circuli trecentas sexagesimas Ptolemæus uocat  
*μῶραι* in zodiaco, latini partes & gradus: in æquinoctiali autem *χρόνοι*,  
id est tempora, quia cum æquinoctialis circulus in mundi conuersione  
æquabiliter oriatur & occidat, partes eius aptissime diurna atq; nocturna  
tempora metiuntur. Itaq; cum *ὥρη* spatium, id est, dies natura-  
lis, ut uulgo uocant, distribuatur in 24 horas æquinoctiales, uni horæ ne-  
cessario congruunt 15. tempora ferè. Hinc quilibet *χρόνος* seu tempus  
æquinoctialis circuli pars est decima quinta unius horæ, ut nimium mo-  
mentum temporis, quod communifere sensu animaduertatur. Verum  
hæc atq; similia ex Elementis doctrinæ sphaericæ petenda sunt.

**17. PRAECEPTVM.** Canon ascensionum rectarum condendus  
est conueniens dato temporis.

Hoc præceptum planè simile est undecimo. Primum enim ex canonio  
disces



disces scrupula proportionalia, quæ illi tempori ante uel post Christum conueniunt, quibus congruentem partem de excessibus singulis addes uel auferes suis ascensionibus. Hac uia compones nouum canonem ascensionum rectarum apud dato tempori sine ullo excessu et parte proportionali. Addo exemplum. Vt rursus annis 1013. ante Christum, uel post annis 88, fuerunt scrupula proportionalia 25'. Primus autem gradus V rectam habet ascensionem temporis 0. scr. 55'. 2", excessum uero scrupulorum 0'. 10", de quib. congruunt 25 scrupulis scrupula 0'. 4" fere auferenda, eo quod excessus in quadrante uernali aufertur. Erit igitur primi gradus V recta ascensio temporum 0. scr. 54'. 5" 8 fere. Ad hunc modum si emendaueris singulas ascensiones, et ordine suo collocaueris, absolues nouum canonem temporaneum, congruentem simpliciter dato tempori sine parte proportionali.

18. **PRAECEPTUM.** Data ascensione recta ad datum tempus gradus Eclipticae coariens inueniatur.

Ascensio siue recta siue obliqua arcus est æquinoctialis circuli, quem arcum ab initio V in consequentia signa continuari semper intelligas, nisi diserte aliud initium exprimatur. Quilibet uero arcus æquinoctialis idem Eclipticae segmentum sibi uendicat in recto horizonte, ac meridiano, ut dictum est, nisi quod eadem pars Eclipticae in ortu  $\mu\omicron\iota\epsilon\alpha\ \alpha\upsilon\alpha\tau\acute{\iota}\lambda\lambda\omicron\varsigma\alpha$ , in  $\alpha\upsilon\alpha\tau\omicron\lambda\eta$  meridiano uero  $\mu\epsilon\tau\epsilon\gamma\alpha\nu\epsilon\sigma\alpha$  uocatur à Ptolemæo, unde adpellationes  $\mu\epsilon\tau\epsilon\gamma\alpha\nu\epsilon\sigma\alpha$  sunt  $\alpha\upsilon\alpha\tau\omicron\lambda\eta$  oriens, et  $\mu\epsilon\tau\epsilon\gamma\alpha\nu\eta\epsilon\iota\varsigma$  mediato coeli, ut loquuntur recentiores.  $\sigma\iota\varsigma$ .

Cæterum ut hoc præceptum expedias, utendum est areali ingressu, id quod exemplis accipies quàm breuissime, ne præter rem longius utamur ambagib. præsertim cum infra in 26. præcepto eadē repetenda erunt. Sit igitur data ascensio recta temporum 26. scr. 0'. 0". ad illud tempus, quo scrupula proportionalia recidunt in nihilum, quale nostrum est.

Datus arcus cum in area canonis ascensionum in sphaera recta plane inueniatur, ostendit in capite canonis dodecatemorion V, in margine autem sinistro partem eius 28. Pronuncio igitur cum 26. temporibus uicesimam octauam partem V. una uel euehi supra finitorem, uel transire meridianum.

Quod si eadem conditione detur ascensio recta temporum 26. scr. 4'. 45", inuenies partem, quæ coaritur uel pariter coelum mediat, uicesimam octauam cum scrupulis 5. V. Sicut enim est differentia tota arealis scrupulorum 9'. 30" ad 10 scrupula extranea, ita tua differentia scrupulorum 4'. 45" ad scrupula 5'. Ad hunc igitur modum nostra tempestate simpliciter ac sine parte congruente uteris canone, quia scrupula proportionalia iam iam abeunt in nihilum.

Verum si datum tempus ex superiori canonio aliqua præbet scrupula proportionalia



proportionalia, siquidem iuxta antecedens præceptum in promptu est canon rectarum ascensionum, conueniens dato tempori sine illis scrupulis, non erit alia calculi ratio, quam quæ duobus proximis exemplis monstrata est. Sed si forte desideras huiusmodi canonem, nec commodum tibi est ipsum in exigui temporis usum elaborare, ecce hic calculi cursus tenenduserit. Vt si fuerit ascensio recta temporum 26. scr. 6'. scrupula uero proportionalia forte 20, quære inter areales numeros ascensionum paulo minorem ea quæ data est, ut temporum 26. scr. 0'. 0'', cui excessus attribuitur scr. 4'. 8'', de quo excessu congruunt 20' scrupulis scrupulum 1'. 2'' 3. unius temporis, quæ hoc loco ex præscripto etiam tituli auferenda sunt, ut sit ascensio recta temporum 15. scr. 58'. 3'' 7, cui debetur 28. pars dodecatemori V. At quia data ascensio modo inuentam superat, manifestum est arcum Eclipticæ porrigi ultra illam 28 partem. Excedit enim eam scrupulis 7'. 23'', ac debetur hoc loco 10. scrupulis extraneis differentia tota arealis scr. 9. 30''. Iam per 10 septimi Elem. ut sunt scrupula 9. 3'' 0 ad scrupula 10 extranea, sic scrupula 7'. 23 ad scrupula 7'. 4'' 6 extranea. Accedunt igitur 28. partibus scrupula 7'. 46, quæ cum data ascensione simul transeunt eundem colurum, Generaliter enim colurus dicitur quilibet circulus per mundi polos descriptus, quales sunt meridiani, & qui horizontem rectum definiunt. Sed non addam plura exempla, quia hæc, quæ recitauī, lectorem non stupidum satis erudere possunt.

19. **PRAECEPTVM.** Dato quocunq; arcu Eclipticæ, quomodo ascensio eius recta inueniatur.

De continuis arcibus Eclipticæ.

Hoc præceptum differt à decimosexto, quòd illic arcus eclipticæ intelligitur ab initio V in consequentes partes zodiaci proficisci continuè, hic uero à quocunq; alio puncto zodiaci similiter in partes consequentes. Itaq; gemino usu illius XVI. præcepti & una subtractione præcepti ratio absoluitur, id quod mox duobus subiectis exemplis docebo. Ad hæc igitur nostra tempora, quibus scrupula proportionalia fere nihil sunt, quærat, quod segmentum æquinoctialis coordinatur cum hoc segmento Eclipticæ, quod initium sumens à 10. gradu V. definit in 20. 8. Ex canone igitur arcus Eclipticæ desinent in 10. gradum V habet ascensionem rectam temporum 9. scr. 11'. 1'' 5, ut ab initio V propagatum iuxta præceptum XV. Similiter arcus Eclipticæ desinens in 20 gra. 8. habet rectam ascensionem temporum 47. scr. 32'. 57''. Quòd si priorem uel minorem abstuleris, ut par est, à posteriori siue maiori, relinquetur dati arcus quæsitæ ascensio recta temporum 38. scr. 21'. 4'' 2.

Alterum exemplum. Quærat quantum in sphaera recta ascendat de æquinoctiali à 24. gra. ♊. in 16. gra. V. Primum ascensio recta 24. gradus



dus: est temporum 326. scr. 19'. 6''. quæ tempora ablata à toto circulo  
 relinquunt, quantum oritur à 24. gra. usque ad finem X scilicet tempo-  
 ra 33. scr. 40'. 5'' 4. Deinde cum 16. gradu V ascendunt tempora 14. scr.  
 44'. 12'', quæ addita temporibus 33. scr. 40'. 5'' 4. colligunt ascensionem  
 rectam dati arcus Eclipticæ temporum 48. scr. 25'. 6''. Vel sic. Postea  
 priori ascensionem temporum 14. scr. 44'. 12''. addatur totus circulus, ut  
 summa colligatur temporum 374. scr. 44'. 12'', à quo collecto si priorem  
 ascensionem reieceris temporum 326. scr. 19'. 6''. relinquetur, ut prius,  
 quæ sita ascensio dati arcus temporum 48. scr. 25'. 6''.

Cæterum si datum tempus ex superiori canonio ostendet aliqua scrus-  
 pula proportionalia, sequeris eandem rationem, quæ præcepto XVI. sa-  
 tis demonstrata est.

20. **P R A E C E P T U M.** Dato arcu æquinoctialis circuli, & dato altero  
 arcus eius extremo, qui arcus zodiaci in sphaera recta cum eo  
 peroriatur, explorandum est.

Ut decimum nonum præceptum à decimo sexto, ita differt etiam hoc De conti-  
 nuum à decimo octavo, Similiter igitur gemino usu præcepti 18. & *nus arcu-*  
 una subtractione opus perficitur. Cuius rei unum subiicio exemplum. *bus æquo-*  
 Ad nostra rursum tempora quærat, qui zodiaci arcus in sphaera recta *noctialis.*  
 respondeat segmento 26. temporum æquinoctialis circuli, quod segmen-  
 tum initium sumit à 30. tempore æquinoctialis, proficiscendo à uerna se-  
 ctione utriusque circuli. Cum 30. igitur tempore æquinoctialis oritur  
 pars 2. scr. 11'. 1'' 6' 8, per 18. præceptum, ac per idem cum 56. tempore  
 oritur pars 28. scr. 15'. 14'. eiusdem 8. Datus enim arcus æquinoctia-  
 lis desinit in 56. tempus, ut ab initio arietis proficiscendo. Arcus igitur  
 eclipticæ à secunda parte scr. 11'. 1'' 6' 8 usque in partem 28. scr. 15'. 14' eius-  
 dem dodecatemorii oritur cum dato segmento æquinoctialis.

Non utar autem nec pluribus exemplis, nec intricatioribus, ne oratio  
 nostra semper eadem oberrans chorda fastidium pariat lectori. Sicut  
 autem præcedens præceptum requirit lateralem, ita hoc arealem ingres-  
 sum.

21. **P R A E C E P T U M.** Quomodo ascensio recta cuiusque stelle inue-  
 niatur, data eius longitudine ac declinatione.

De Sole hætenus præcepimus, Nunc generaliter de cuiusque stellæ a-  
 scensione recta. Dantur autem stellarum longitudines quidem ex nostris *De cui-*  
 tabulis Prutenicis, Declinationes uero per 13. præceptum nostrum. Cum *usque stel-*  
 autem huic præcepto seruiat canon Mediationum cœli generalis, initio *la recta a-*  
 partes illius canonis deplorandæ sunt. Deinde præcepti ratio subiicietur, *scensione.*  
 Postremo autem uaria calculi exempla ¶ Canonis partes hæ sunt.

3 Radix



**Partes ca-**  
**nonis.**

**Mediatio-**  
**num coeli**  
**generalis.**

**Radix a-**  
**scensionū.**

**Numerus**  
**multipli-**  
**candus.**

**Differen-**  
**tia latera-**  
**les.**

**Differen-**  
**tia tran-**  
**situs stellæ**  
**per coeli**  
**medium.**

**Præceptū.**

Radix ascensionum cum sua differentia laterali, & numerus multiplican-  
dus itidem cum sua differentia laterali. Additæ sunt etiam, ut supra, diffe-  
rentiæ areales, quæ denis congruunt scrupulis iuxta canonis rationem.  
¶ Est autem radix ascensionū arcus circuli æquinoctialis, comprehensus  
inter sectionem uernam & circulum latitudinis stellæ. Semper autem in  
canone opposita signa zodiaci coniuncta sunt, eo quod puncta zodiaci e  
diametro opposita habent radices ascensionum æquales, nisi quod postea-  
riores a prioribus necessario differunt semicirculo, quia omnes radices  
deducimus ab initio V, siue uerna sectione. ¶ Numerus multiplicandus  
radici ascensionum adscriptus è fecundo canone, sumptus est per arcum,  
quo declinat dati arcus Eclipticæ, ut a proxima sectione, complementum  
usq; ad quadrantem.

Postremo cum utriq; numeri tum radici ascensionum, tum multipli-  
candi accommodati sint ad minimam ☉ obliquitatem, ut supra in cano-  
ne declinationum, ideo utrisq; sua est adiecta lateralis differentia, quæ in  
maxima ☉ obliquitate tota adijcitur, alioqui uero parseius duntaxat  
tanta. quantum sibi uendicant scrupula proportionalia.

Est & hoc non ignorandum, differentiam transitus stellæ per coeli me-  
dium hic intelligi arcū, quo inter se differunt radix ascensionum & ascen-  
sio recta datæ stellæ seu puncti in coelo. Estq; hæc differentia arcus itidem  
æquinoctialis circuli, comprehensus inter duos circulos maximos, latitu-  
dinis, inquam, & declinationis stellæ.

Nunc præceptum recito. Primum cum longitudine stellæ ingressus  
dictum canonem Mediationis coeli generalis ercerpe hæc quatuor, Radia-  
cem ascensionis cum sua differentia laterali, et numerum multiplicandum  
similiter cum sua differentia laterali. Quæ tamen singula emendabis pri-  
us iuxta dena scrupula, quibus canon propagatur. Habeas uero etiam  
scrupula proportionalia ex canone X præcepti, & partem ipsis congruen-  
tem de utraq; differentia laterali semper adde, ac illi quidem numero, cuius  
fuerat differentia.

Ita scilicet absolutam habebis radicem ascensionis, itemq; numerum  
multiplicandū pro ea Solis obliquatione, quæ ad datū tempus quadrat.  
Interea autem adserua utrunq; Postea ex fecundo nostro canone excer-  
pe numerum congruentem declinationi stellæ. Per hunc numerum mul-  
tiplicato numerum multiplicandum modo adseruatum, & abiectis sep-  
tem primis figuris uersus dextram, relinquetur sinus differentię transitus  
stellæ per coeli medium. Ideoq; per 5. præceptum nostrum arcus eius ex  
canone sinuum dabitur. Hic arcus additur uel aufertur radici ascensio-  
num, ut existat numerus ascensionis rectæ, deductus ab initio V seu  
uerna



uerna sectione, Additur quidem, dum locus longitudinis stellæ incidit uel in semicirculum zodiaci deuehentem, ac stella declinat in boream, uel in semicirculum euehentem cum declinatione australi. Contr'a uero auferitur, dum locus longitudinis stellæ incidit uel in semicirculum zodiaci deuehentem stella declinante in austrum, uel in semicirculum attollentem declinatione australi. Voco autem semicirculum zodiaci euehentem seu attollentem, qui à signo seu puncto tropico hiberno proficiscitur per uernam sectionem usq; ad signum tropicum æstiuum, Reliquum uero semicirculum oppositum deuehentem, Quia ut in hoc denotantur stellæ in austrum, ita in aquilonem & ad uerticem capitis nostri in illo attolluntur.

Semicirculus  
zodiaci  
euehens.  
Deuehens.

Illud uero notissimum est, adsumendum esse integrum circulum, seu gradus 360, si quando numerus, unde est subtrahendum, minor est eo, quem subtrahi oportet.

Verum hoc minime dissimulandum est, cum respondeant cuilibet sinui duo arcus ambo æquales semicirculo, quorum alter maior est quadrante, alter minor: tunc arcu utendum esse minore quidem, quando arcus circuli latitudinis comprehensus inter uerum locum stellæ & æquinoctialem minor itidem fuerit quadrante circuli, maiore autem, dum ille arcus quadrantem excedit. id quod accidit in stellis inerrantibus circa & inter utrunq; polum, quarum longitudo pertinet ad semicirculum zodiaci septentrionalem.

Reliquum est, ut exempla subiciantur. Annis igitur 1322, ante Christum (in quod tempus incidit initium anni Cynici Ægyptiorum) fuit longitudo caniculæ part. 56.54'.33". scr. ut ab apparenti æquinoctio. Declinatio uero supra inuenta est part. 18.38'.39" Australis. Ex canonio autem decimi præcepti scrupula proportionalia sunt 10' prima ferè. Intro igitur tabulam mediationum cœli generalem cum longitudine stellæ partium 56.50', uel part. 26.50' & , quæ in canonis margine scripta est, ac proxime minor est data stellæ longitudine, Excerpto autem hæc quatuor, Radicem ascensionum partium 59.3'.26". cum differentia descendente 9'.37" scr. Differentiam lateralem huius Radicis 4'.39" scr. cuius descendens differentia 0'.1". Numerum multiplicandum particularum 2232156. cum differentia descendente 10436. Ac deniq; differentiam huius multiplicandi lateralem 37675, cuius descendens differentia 194. particularum.

Exempla.

Cum



Cum autem de partibus 56. 50' super sint adhuc 4'. 33". scrup. totæq; differentia descendentes congruant denis scrupulis, ideo 4'. 33" scrupulis congruunt hæ partes proportionales, de prima quidem differentia 4'. 23" scrupula, de secunda uix dimidium scrupulum secundum, quod iure negligitur, de tertia differentia pars proportionalis particulæ 4748, de quarta differentia particulæ 87. Prima pars proportionalis additur suo principali, quia posteriores numeri adhuc crescunt. Reliquæ tres subtrahuntur singulæ à suis principalibus, quia posteriores eorum numeri decrescunt, ut patet ex canone. Itaq; hæc quatuor rite emendata tandem pro partibus 56. 54'. 33". scrupulis uniuersis sic sese habent, Radix ascensionum part. 69. 7'. 48". Differentia eius lateralis 4'. 39". Numerus multiplicandus particularum 2227408. Differentia uero eius lateralis 37588. Iam de utraq; differentia laterali rursus sumenda est pars proportionalis congruens 10. scrupulis proportionalibus pro ut 60 scrupulis totæ debentur differentia. Igitur de 4'. 39". scrupulis ἐπιβάλλομεν seu pars congruens 10. scrupulis est 0'. 47 scrupulorum, quæ addita radici ascensionum exhibent eam emendatam part. 59. 8'. 35". Similiter de particulis 37588 pars proportionalis est 6265, quæ item addita numero multiplicando exhibet eum emendatum 2233673. Hanc igitur emendatam radicem ascensionum, numerumq; multiplicandum interea adserues. Porro cum declinatione stellæ ingressus secundum canonem, usq; emendatione colligis numerum particularum. 3373956. qui numerus cum multiplicando proxime adseruato multiplicatus gignit numerum, à quo reiectis 7. primis figuris ad dextram relinquitur hic numerus 753631, sinus uidelicet differentia transitus stellæ per cœli medium. Ideoq; per 5. præceptum ipsa differentia transitus stellæ partium 4. 19'. 20" ferè adicienda radici ascensionum, eo quod stellæ locus secundum longitudinem incidit in semicirculum euehentem cum declinatione australi. Itaq; recta ascensio caniculæ colligitur temporum 63. 27'. 55".

*Alia exempla.*

Prolixius recitavi primum exemplum discentium causa, sed reliqua exempla percurram breuiter. Nam plura huius præcepti exempla commemoro propter sequentia. Eadem igitur canicula annis 138. post Christum (in quod tempus incidit finis primi anni Cynici Ægyptiorum, & initium secundi) habuit longitudinem part. 77. 39'. 55" ab apparenti æquinoctio, ac declinationem part. 15. 44'. 38" Australem. Scrupula uero proportionalia eius temporis sunt 58. ferè. Rursus igitur per longitudinem stellæ excerpo hæc quatuor emendata, Radicem quidem ascensionum part. 78. 39. 29, Differentiam eius lateralem 2'. 1". scrup., Numerum multiplicandum 353772, Differentiam huius lateralem 13812. Iam pars congruens



congruens 8 scrupulis proportionalibus, de priori quidem differentia partis est 0. 1'. 7". de posteriori uero particularum 1. 33. 2. Absoluta igitur radix ascensionum part. 78. 41'. 26". Et numerus multiplicandus 867124. Per declinationem autem stellæ colligitur ex fœcundo canone numerus particularum 2819140. Hinc sinus differentię transitus stellæ per cœli medium 244454. Ac ipsa differentia partium 1. 24'. 3". addenda radici absolutæ. Recta igitur ascensio Caniculæ ad datum tempus est temporum 80. 5'. 2" 9.

Similiter nostro tempore, & hoc ipso anno 1552. eiusdem Caniculæ longitudo est part. 98. 37'. 3" 7. Declinatio partium 15. 54'. 1" 6. Austr. Et scrupula proportionalia 0. 3" 0. id est, ferè nihil. Emendata igitur & absoluta radix ascensionum, partium est 97. 55'. 2" 4. Numerusq; multiplicandus 598479. Numerus autem ex fœcundo canone 2849414. Vnde sinus differentię transitus 170531. & ipsa differentia part. 0. 58'. 3" 8. auferenda, quia locus longitudinis stellæ pertinet ad semicirculum zodiaci deuehentem cum declinatione Australi. Ad datum igitur tempus recta ascensio Caniculæ est temporum 96. 56'. 4" 6.

Sumamus autem & alia exempla, ut Pleiadum sequentem terminum *Alia exempla.* angustissimum, cuius fuit annis 1322. ante CHRISTVM longitudo partium 12. 54'. 3" 3. Declinatio borealis partium 10. 1'. 2" 0. scrupula proportionalia, ut prius. Emendata igitur & absoluta radix quidem ascensionum 14. 2'. 10". sed numerus multiplicandus 4225047. Numerus autem ex fœcundo Canone 1767268. Hinc sinus differentię transitus 746679. & ipsa differentia partium 4. 16'. 5" 6. auferenda, quia locus longitudinis stellæ, pertinet ad semicirculum zodiaci euehentem cum declinatione borea. Recta igitur ascensio Pleiadum est temporum 9. 45'. 14".

Similiter eiusdem termini Pleiadum fuit annis 138. post Christum longitudo part. 33. 39' 5". Declinatio 17. 57'. 7" borealis. Ideo emendata & absoluta radix ascensionum est temp. 36. 3'. 50". Numerus multiplicandus 3574294. & numerus ex fœcundo Canone 3239926. Ideo sinus differentię transitus stellæ 1158045. & ipsa differentia part. seu temporum 6. 39'. 0". subtrahenda. Idcirco ad datum tempus recta pleiadum ascensio est temporum 29. 24'. 50".

Similiter etiam nostro tempore eiusdem termini pleiadum longitudo est part. 54. 37'. 37". Declinatio part. 24. 6'. 42". borea. Ideo radix ascensionum emendata & absoluta part. 56. 55'. 36". Numerusq; multiplicandus 2169400. Numerus autem ex fœcundo Canone 4475659. Quare sinus differentię transitus stellæ 1060463. & ipsa differentia part 6. 5'. 1" 5. auferenda. Idcirco ascensio recta temporum est 50. 50'. 2" 1.



Cuiusq;  
stellæ ascen-  
sio recta.

22. **PRAECEPTVM.** Qui gradus *Ecclipticæ* coorientur in *sphæra recta*, uel *coelum mediet*, cum qualibet stella, cuius longitudo & declinatio data est.

Supra in 17. præcepto monui studiosum lectorem, quod, qui *Ecclipticæ* arcus dato æquinoctialis arcui competit in recto horizonte, idem etiam ubiq; terrarum competat ei in circulo meridiano. Itaq; cum per antecesses præceptum uicesimum primum inueneris datæ stellæ ascensionem rectā, recurrendum deinceps est ad dictum præceptum 17. quod docet ex ascensione recta gradum *Ecclipticæ* seu coorientem in *sphæra recta*, seu mediantem *coelum* in quolibet horizonte ratiocinari. Nam hæc recta ascensio communis est datæ stellæ, & gradui *Ecclipticæ*, cum quo stella ipsa *coelum* mediat. Cæterum hoc in primis etiam Elementis traditur, quod, nisi stella fuerit in coluro solstitiali, alius sit *Ecclipticæ* gradus, ad quem pertinet locus longitudinis stellæ, alius itidem *Ecclipticæ* gradus coorientis in *sphæra recta*, uel meridiano. Nam in decliui seu obliqua *sphæra* multiplex horum ortuum uarietas existit, ut docebunt sequentia.

**Exempla.**

Repeto autem calculum 18. præcepti uno exemplo studiosi lectoris gratia. Cum igitur annis ante Christum 1322. Caniculæ recta ascensio per præcedens præceptum inuenta sit temporum 63. 27'. 55". cum hac ingredior Canonem ascensionum in *sphæra recta*. Ac inter areales numeros inuenio ascensionem rectam 63. temporum 24. 1"8. respondentem partibus 5. 20'. scr. II in minima ☉ obliquitate, id est, cum scrupula proportionalia nihil sunt. Verum cum ad datum tempus scrupula proportionalia sint 10 ferè, his de differentia laterali seu adscripta scrupulorum 4'. 1"3. competunt 0'. 4"2. scrupula unius partis, quæ pars proportionalis auferenda est ex ascensione recta temporum 63. 24'. 1"8. Erit igitur ascensio recta temporum 63. 23'. 3"6. respondens partib. 5. 20'. II in ea ☉ maxima obliquitate, quæ sibi uendicat 10. scrupula proportionalia. At data ascensio temporum 63. 27'. 5"5. hanc modo inuentam superat 4'. 1"9. scrupulis. Cumq; scrupulis 10'. 34". id est, differentia descendenti in area Canonis extra respondeant 10. scrupula, ideo scrupulis 4'. 1"9. congruant extra 4'. 5". scrupula, addenda partib. 5. 20'. II. Ad datum igitur tempus oriebatur Canicula in *sphæra recta* pars 5. 24'. 5". scr. II.

Ad eundem modum Canicula annis post Christum 138. oriebatur in *sphæra recta* seu mediabat *coelum* cum parte 20. 55'. 2"4. II.

Et hoc anno 1552. *coelum* mediat cum parte 6. 22'. 3"4.

Similiter pleiadum angustissimus terminus annis 1322. ante Christum *coelum* mediabat cum parte 10. 37'. 10". V.

Et annis 138 post Christum cum parte 1. 39'. 6". 8.

Hoc



Hoc uero anno 1552. coelum mediat cum parte 23. 14'. 17. 8.

Hactenus de rectis ascensionibus, Nunc ad obliquas transeundum est. Prius tamen qua ratione plerique sequentes canones de integro construiendi sint, docendum est, ut quæ in sphaericis Elementis uulgo traduntur, rectius queant intelligi. Præcedit autem Canon differentiarum ascensionalium, ut ex quo reliqui fere propagantur.

23. P R A E C E P T V M. Quomodo Canon differentiae ascensionalis condendus sit.

Quid sit  
differentia  
ascensiona  
lis.

Prius recitanda est definitio, postea præceptum. Est igitur differentia ascensionalis æquinoctialis circuli segmentum, quo inuicem differunt ascensio recta & obliqua eiusdem dati puncti Ecclipticæ, seu cuiuscunque. Compræhenditur autem hoc segmentum æquinoctialis inter horizontem obliquum & colurum transeuntem per datum punctum, ita ut hoc ipsum punctum in horizonte collocari intelligatur. Sicut enim datum coeli punctum & punctum æquinoctialis, quod unà uel oritur uel occidit, simul existere in horizonte siue recto siue obliquo oportet, Ita colurus per datum coeli punctum descriptus simul etiam transit per punctum æquinoctialis, quod uel oritur, uel occidit simul in sphaera seu horizonte recto. Coluri enim & Meridiani, & horizontes recti omnes eandem habent rationem, ac pariter per mundi polos describuntur.

Præceptum sic se habet. Ex fecundo Canone singulorum graduum, numeros excerpe usque ad 90. Et singulos usque ad 89. multiplicato per primum gradus numerum. Deinde rursus singulos per secundum gradus numerum, incipiendo a secundo, & desinendo in 88. Inde rursus singulos per tertium gradus numerum incipiendo a tertio, & desinendo in 87. Item singulos per quartum gradus numerum incipiendo ab eodem, & desinendo in 86. Eodem modo consequenter si perges usque ad 45. gradum, nihil ociose facies. Quod si postea ex singulis emergentibus numeris 7. figuras primas, seu proximas dextræ abieceris, reliqui fient sinus differentiarum ascensionalium ad singulos gradus latitudinum & declinationum, ut mox exemplis declarabimus. Verum si ad semisses uel sextantes graduum, uel ad singula scrupula condere uoles hunc canonem, erunt ex fecundo canone similiter excerpti numeri, scilicet ad semisses, uel sextantes graduum, uel ad singula scrupula. Exempla de integris gradibus.

Numerus in fecundo canone adscriptus uni quidem gradui est 174550. at duobus gradibus 349207. Iam si prior in sese multiplicetur, & abiciantur 7. figurae, erit reliquus sinus 3047. differentiae ascensionalis, dum latitudo regionis, pariter & declinatio dati puncti

3 2 unius



unius est gradus. Sed si prior itidem multiplicet posteriorem, euadet sinus differentiae ascensionalis 6095. dum uel latitudo est unius gradus, & declinatio duorum: uel uicissim latitudo duorum graduum, & declinatio unius. Postremo iuxta 5. praeceptum ipsas differentias ascensionales depromes ex Canone sinuum. Subñcio autem breuem tabellam plurium exemplorum. In sequentibus enim praeceptis cætera explicabuntur.

*Tabella præcedentis calculi.*

| Numeri ex<br>fœcũdo can. |        | SINVS differentiarum ascensionalium. |       |       |       |            |
|--------------------------|--------|--------------------------------------|-------|-------|-------|------------|
| ũ                        |        | 1                                    | 2     | 3     | 4     | Et cætera. |
| 1                        | 174550 | 3047                                 |       |       |       |            |
| 2                        | 349207 | 6095                                 | 12195 |       |       |            |
| 3                        | 524078 | 9148                                 | 18301 | 27466 |       |            |
| 4                        | 699268 | 12206                                | 24419 | 36647 | 48898 |            |
| Et cætera.               |        |                                      |       |       |       |            |

**24. PRAECEPTVM.** *Differentia ascensionalis cuiusq; puncti  
Ecclipticae uel coeli inuenienda est, data declinatione  
eius & latitudine regionis.*

**Duplex ratio operis.** Duplex ratio huius operis aperienda est, quarum prior usum monstrabit Canonis, quem elaborare antecedens docuit praeceptum, posterior autem sine illo Canone tardius quidem, sed nonnunquam aliquantò certius quaesitum adsequetur. Iam, ut canonis ratio dextrè intelligatur, sciendum est primum, duas omnino esse causas, cur differentiae ascensionales ita uariant, uidelicet, declinationem dati puncti, & latitudinem regionis. Nam & eiusdem dati puncti in coelo, seu potius manente declinatione, tantum men alia existit differentia ascensionalis in alia regionis latitudine, Et rursum in eadem quoq; latitudine mutatur differentia ascensionalis una cum declinatione dati puncti. Porro singula puncta eiusdem paralleli, aut etiam duorum antæcorum parallelorum eandem usurpant declinationem. Deinde & hoc ex præcedenti compositione intelligi potest, quòd eadem maneat differentia ascensionalis, tamen si declinatio dati puncti & latitudo regionis numeros suos inuicem commutent, Verbi gratia, quanta est differentia ascensionalis puncti declinantis ab æquinoctiali 24. gradibus in latitudine regionis 50. graduum, tanta est etiam puncti declinantis 50. grad. in latitudine 24. grad. Hæc præmittenda erant propter sequentia.

Iam



Iam quod ad canonem adtinet, area quidem eius continet ipsas differentias ascensionales, sed extremi numeri tum transversales seu capitales, tum laterales seu sinistri sunt numeri graduum latitudinis & declinationis indifferenter, ut mox exemplis etiam patebit, Item usque ad 12. gradum capitalem differentiae ascensionales habent tempora cum scrupulis primis atque secundis, porro autem usque ad 45. gradum tempora duntaxat cum scrupulis primis, denique post duodecimum gradum capitalem sub quolibet capitali, differentiae ascensionales initium sumunt e regione gradus lateralis, qui aequalis est eidem capitali, ut sub 13. gradu capitali e regione gradus decimi tertij lateralis, ut sub 19. gradu capitali e regione 19. gradus lateralis.

Ex hac autem descriptione, & praecedenti praeepto manifestum est, huius canonis usum non esse, nisi cum ambo numeri, declinationis inque & latitudinis regionis, simul minores sunt quadrante. Alioqui enim nulla est differentia ascensionalis, quia datum punctum non oritur, sed in mundi conuersione, & illa latitudine aut stringit horizontem, dum ambo numeri simul aequant se quadranti, aut semper uel extat supra finitorem, uel latet, dum ambo quadrantem superant. Adparet quidem semper, cum datum punctum declinat uersus polum adparentem, seu cum declinatio & latitudo regionis fuerint in eodem hemisphaerio, latet autem cum latitudo & declinatio fuerint in diuersis hemisphaerijs, quae plano aequinoctialis distinguuntur.

*Quando nulla est differentia ascensionalis.*

Recito autem nunc praeeptum, cuius ratio iam est satis perspicua. Dato enim utroque numero, scilicet declinationis dati puncti et latitudinis regionis, minorem eorum sursum quære inter capitales, maiorem autem inter laterales seu descendentes extremos. Communis enim profelis ostendet mox differentiam ascensionalem, si gradibus numerorum non adhaeserint scrupula. Sin autem adhaeserint, utendum est parte proportionali, semel quidem, si alter numerorum caruerit scrupulis, bis autem, si neuter. Vtraque uero pars semper adhaeretur differentiae ascensionali, quae congruebat integris gradibus utriusque numeri. Caeterum in excerpendis differentijs numerorum uicinarum arealium uide, ut lateralem differentiam attribuas scrupulis adiacentibus capitali numero, descendentem uero scrupulis lateralis numeri siue maioris. Accipe autem breuiter exempla.

*Prior ratio*

Sit ergo declinatio dati puncti 10. graduum, Regionis autem latitudo graduum 25. Ingressus itaque canonem, dum sursum accipio 10. gr. ut pauciores, in latere autem sinistro 25. gradus, ut plures, communis angulus ostendit differentiam ascensionalem temporum 4. 42'. 59". quae per se emendata atque absoluta est, quia nulla scrupula gradibus ipsis datorum

*Exempla.*

3 3 numerorum



numerorum annexa sunt. Tanta est etiam differentia ascensionalis, dum declinatio dati puncti fuerit 25. graduum, latitudo uero decem.

Rursum sit alter datorum numerorum gr. 16. 40'. alterum gr. 70. 30'. Ingressus ergo similiter cum integris gradibus elicio differentiam ascensionalem temporum 51. 58'. 5" 4. Differentia autem descendens est temporum 4. 24'. 5" ut inter duos numeros 51. 58'. 5" 4. & 56. 22'. 5" 9. interiecta, de qua differentia sumenda est pars congruens 30. scrupulis ut quæ 70. gradib. id est, laterali numero annexa sunt. Est autem pars proportionalis 2. 12'. 2". Similiter differentia lateralis est temporum 5. 9'. 22". comprehensa scilicet inter duos collaterales numeros 51. 58'. 5" 4. & 57. 8'. 1" 6. de qua differentia capienda est pars congruens 40. scrupulis, quæ 16. gradib. id est, capitali numero adiacent; estq; hæc pars proportionalis temporum 3. 2' 6. 1" 5. Iam ambæ partes proportionales faciunt summam temporum 5. 38'. 1" 7. quæ adiuncta primario numero temporum 51. 58'. 5" 4. absoluit differentiam ascensionalem, quæ sita temporum 57. 37'. 1" 1. Et hactenus quidem de priori ratione operationis.

**Posterior.**

Posterior ratio pendet ex præcepto præcedenti. Data enim declinatione & latitudine regionis, sume numeros congruentes ipsis e fœcundo canone. Ambobus autem multiplicatis inuicem, si abijeceris 7. primas figuras uersus dextram, reliquum habebis, ut prius, sinum differentię ascensionalis, &c. Repetatur exemplum proximum, ubi gradibus 16. 40'. debetur e fœcundo numerus particularum 2993804. & gradibus 70. 30'. numerus 28239125. Quibus inter se multiplicatis, & reiectis 7. primis figuris, existit sinus differentię ascensionalis 8454240. ac propterea ipsa differentia ascensionalis temporum 57. 43'. 3". penè 6. scrupulis differens a priori operatione.

Contingit enim, cum ambo numeri dati propemodum æquant se quadranti, id est, 90. gradib. circuli, ut prior operatio a posteriori, quæ exacte collimat, discrepet non nihil. Id quod haud accidit uitio canonis differentiarum ascensionalium, sed quia tunc differentię tum collaterales, tum descendentes subitam habent & inæquabilem mutationem. In tali igitur casu prudens Logista posteriorem hanc uiam potius sequetur, nisi canonem differentiarum ascensionalium malint ad singula scrupula totius quadrantis prius componere. Verum hoc absq; maximo labore fieri non potest, ut taceam, quàm ingrata moles unius huius canonis futura sit.

**Quando**

**addēda uel**

**auferenda**

**sit differen-**

Postremo differentia ascensionalis sic inuenta rectę ascensionis dati puncti auferenda est, cum declinatio borealis fuerit, adijcienda uero, cum australis, Quia sicut puncta cœli borealia exoriuntur in mundi conuersione ante suam ascensionem rectam, sic contra puncta australia exoriuntur

tur



tur post suam rectam ascensionem, id est, differentiam suam ascensionalem superaddunt ascensioni rectæ. tia ascensionalis.

25. **P R A E C E P T V M.** *Qui ratione Canones obliquarum ascensionum condendi sint denuo ad quamlibet mundi ætatem, seu ad quamlibet solis maximam obliquitatem.*

Et si otiosum uideri potest rationem hanc tradere, postquam ad singulos gradus latitudinis per totum quadrantem Canones obliquarum ascensionum nostra opera in promptu sunt, tamen cum ingeniosi homines delectentur huius generis calculo, qui fontes negocij aperiat, non po-  
Condēdi ca-  
nones ascēsi-  
onum obli-  
quarum.  
nitebit nos huius operæ, cuius multiplex recitari posset utilitas. Verum ut de multis pauca attingamus, usus est huius præcepti non solum in corrigendis erratis, si qua forte in canones obliquarum ascensionum irrepperint, uerum etiam quod studiosum lectorem cognitio eius ad ipsos fontes deducit doctrinæ ascensionum, quæ quidem lucem nisi ex huius præcepti exercitio uix habere potest. Sed accedo ad rem ipsam.

Primum de doctrina undecimi præcepti habeas ad datam mundi ætatem Præceptū.  
Canonē obliuationis solaris per singulos gradus quadrantis. Postea per singulorum graduum declinationes ad datam seu sumptam regionis latitudinem colligito differentias ascensionales iuxta doctrinam uicesimi tertij præcepti. Meminerit autem hoc loco studiosus, quod puncta Ecclipticæ usurpantia æquales, licet dissimiles declinationes, habeant æquales etiam differentias ascensionales, ut initia quatuor dodecatemori-  
rum  $\Pi$   $\Omega$   $\&$   $\approx$ , ac similiter quælibet 4. puncta Ecclipticæ, quorum duobus ab uno eodemque puncto uel tropico uel æquinoctiali æquidistantibus reliqua duo ex diametro utrunque utriusque obijciuntur. Præterea iuxta doctrinam 16. præcepti sit in promptu Canon rectarum ascensionum dato temporis conueniens. His omnibus præparatis singulorum Ecclipticæ graduum differentias ascensionales rectis suis ascensionibus, aufer quidem per semicirculum zodiaci borealem, adde uero per australem. Hoc enim pacto colliges ascensiones obliquas ad datam, uel sumptam regionis latitudinem.

Verum ut hoc præceptum gratius simul fiat, atque illustrius, exemplum Exemplū.  
adijciendum est. Ac propositum sit conderetabulam obliquarum ascensionum ad latitudinē 54. gr. sub maxima declinatione uel obliuatione  $\odot$  23. partium



partium 52'.scr. quanta ferè Ptolemæi tempore fuit. Igitur ex nostris cano-  
 nibus mox per se dati sunt duo Canones , nempe obliquationis ☉ , &  
 ascensionum rectarum ad singulos gradus , hic quidem totius circumfer-  
 rentiæ, ille uero unius quadrantis circuli. At per præceptum 23 .dabun-  
 tur ad latitudinem 4.grad. differentiæ ascensionales ad singulos gradus  
 unius quidem quadrantis, sed quæ ad reliquos tres quadrantes circuli si-  
 militer accommodentur, ut dictum est , & mox patebit exemplo . Sub-  
 iñcio autem tabellam, ut cætera declarentur facilius.

Tabellæ prior pars.

| Zodi-<br>aci<br>grad. | Declina-<br>tiones. | Differen-<br>tiæ ascen-<br>sionales. | Ascensio<br>recta gra-<br>duum. | Ascensio<br>obliqua<br>graduū. | Ascensio<br>recta gradu-<br>um. | Ascensio ob-<br>liqua gradu-<br>um. |
|-----------------------|---------------------|--------------------------------------|---------------------------------|--------------------------------|---------------------------------|-------------------------------------|
| V                     | ♏                   | G. / // tem. / //                    | V                               | V                              | ♏                               | ♏                                   |
| 0                     | 30                  | 0 0 0                                | 0 0 0                           | 0 0 0                          | 180 0 0                         | 180 0 0                             |
| 1                     | 29                  | 0 24 17                              | 0 33 26                         | 0 54 52                        | 179 5 8                         | 178 31 42                           |
| 2                     | 28                  | 0 48 33                              | 1 6 50                          | 1 49 45                        | 178 10 15                       | 177 3 25                            |
| 3                     | 27                  | 1 12 48                              | 1 39 14                         | 2 44 38                        | 177 15 22                       | 175 36 8                            |
| 4                     | 26                  | 1 37 2                               | 2 13 39                         | 3 39 33                        | 176 20 27                       | 174 6 48                            |
| ♏                     | X                   |                                      |                                 |                                |                                 |                                     |

Pars eius posterior.

| Zodia-<br>ci gra-<br>dus. | Declinati-<br>ones. | Different.<br>ascensio-<br>nales. | Ascensio re-<br>cta gr. II. | A scensio<br>obliqua II. | Ascensio re-<br>cta gr. ☿. | Ascensio ob-<br>liqua gr. ☿. |          |
|---------------------------|---------------------|-----------------------------------|-----------------------------|--------------------------|----------------------------|------------------------------|----------|
| II                        | ☿                   | Gr. / //                          | tem. / //                   | temp. / //               | temp. / //                 | temp. / //                   |          |
| 26                        | 4                   | 23 48 18                          | 37 23 37                    | 85 37 38                 | 48 14 1                    | 94 22 22                     | 56 58 45 |
| 27                        | 3                   | 23 49 55                          | 37 26 55                    | 86 43 12                 | 49 16 17                   | 93 16 48                     | 55 49 53 |
| 28                        | 2                   | 23 51 4                           | 37 29 16                    | 87 48 47                 | 50 19 31                   | 92 11 13                     | 54 41 57 |
| 29                        | 1                   | 23 51 46                          | 37 30 42                    | 88 54 23                 | 51 23 41                   | 91 15 37                     | 53 34 55 |
| 30                        | 0                   | 23 52 0                           | 37 31 10                    | 90 0 0                   | 52 28 50                   | 90 0 0                       | 52 28 50 |
| ♏                         | ♏                   |                                   |                             |                          |                            |                              |          |

In huius igitur tabellæ priori parte profecti sumus ab initio V usq; ad  
 quartum gradum , quorum singulis primum suæ declinationis , postea  
 differentiæ



differentiæ ascensionales adscriptæ sunt, Quæ similiter congruunt primis 4. gradibus  $\cap$ , & postremis quatuor  $\text{III}$  &  $\text{X}$ . Iam si uerbi gratia differentiam ascensionalem primi gradus  $\text{V}$ , nempe tempus 0. 33'. 2"6. abstuleris ascensioni rectæ eiusdem primi gradus, quæ est temporum 0. 54'. 5"2. relinquetur ascensio obliqua eiusdem primi gradus temporum 0. 21'. 2"6. Quod si eandem differentiam ascensionalem abstuleris ascensioni rectæ 29. gradus  $\text{III}$ , scilicet temporum 179. 5'. 8". reliqua erit ascensio obliqua 29. gradus  $\text{III}$  temporum 178. 31'. 4"2. Denique si eandem differentiam adiunxeris ascensioni rectæ uel primi gradus  $\cap$ , uel 29.  $\text{X}$ , habebis obliquas ipsorum ascensiones. Similiter si differentiam ascensionalem congruentem secundo gradui  $\text{V}$ , quæ est temporis 1. 6'. 5"0. abstuleris à recta sua ascensione temporis 1. 49'. 4"5. reliquam facies obliquam eius ascensionem temporis 0. 42'. 5"5. Eodem modo cætera iudicabis.

In posteriori autem parte Tabellæ à 26. gradu  $\text{II}$  usque ad Cancrī initium progressi sumus, adscriptis per declinationes suas, & per latitudinem regionis differentiis ascensionalibus, quæ similiter pertinent ad 4. primos gradus  $\text{D}$  &  $\text{B}$ , itemque ad quatuor postremos gradus  $\text{F}$ . Vt uicesimus sextus gradus  $\text{II}$  uel  $\text{F}$ , itemque quartus  $\text{D}$  uel  $\text{B}$  habent differentiam ascensionalem temporum 37. 23'. 3"7. quæ in duobus illis punctis semicirculi borealis quidem auferenda, australis uero addenda est congruenti rectæ ascensioni, ut ablata à recta ascensione uicesimi sexti gradus  $\text{II}$ , quæ est temporum 85. 37'. 2"8. relinquit ascensionem eius obliquam temporum 48. 14'. 1". Vel ablata ab ascensione recta quarti gradus  $\text{D}$  temporum 94. 22'. 2"2. ostendit reliquā eius obliquam ascensionem temporum 56. 58'. 4"5. & cætera. Quod si ad hunc modum perrexeris, absolues canonem obliquarum ascensionum ad singulos gradus propagatum sub latitudine regionis 54. graduum.

Quamquam hoc minime dissimulandum est, quod ex obliquis ascensionibus semicirculi borealis multo facilius pateant obliquæ ascensiones australis semicirculi. Etenim obliquarum semicirculi borealis ascensionum complementa usque ad integrum circulum sunt obliquæ ascensiones semicirculi zodiaci australis, sed conuersa uia, ita ut conferantur inuicem bini gradus ab eiusdem æquinoctii puncto æqualiter distantes. Verbi gratia, primus  $\cap$  gradus, & uicesimus nonus  $\text{III}$  equali interstitio absunt à puncto autumnalis æquinoctii. Vtrobique enim integer gradus interiectus est, si quidem pleni gradus intelligendi sunt, ut initio huius operis monuimus. Est autem obliqua ascensio 29. gradus  $\text{III}$  inuenta temporum 178. 31'. 4"2. Huius complementum ad integrum circulum est tempus

De semicir-  
culo austr-  
li zodiaci  
aliter.

rum



rum 181. 28'. 1" 8. ascensio uidelicet obliqua primi gradus  $\frac{1}{2}$ , numerata  
 continuè à uerna sectione. Item ascensio obliqua uicesimi octauì gradus  
 inuenta est temporum 177. 3'. 2" 5. ita ut circulum expleant tempora  
 182. 5' 6. 3" 5. quæ est obliqua ascensio secundi gradus  $\frac{1}{2}$ . Atq; eodem mo-  
 do consequenter recurrendo per inuentas ascensiones obliquas singulo-  
 rum graduum semicirculi borealis, efficies obliquas ascensiones singulo-  
 rum graduum semicirculi australis progrediendo. Ratio autem huius  
 compendij manifesta est, Quia sicut rectæ ascensiones talium duorum  
 punctorum ab eiusdem æquinoctij puncto æqualiter distantium iunctæ,  
 equant se integro circulo, ita obliquas etiam eorundem punctorum æqua-  
 les esse toti circulo oportet, propterea quòd quanta differentia ascensio-  
 nalis subtrahitur in boreali semicirculo, tanta uicissim additur in austræ-  
 li. Oportet autem ab eadem sectione zodiaci & æquinoctialis ascensiones  
 omnes perpetua serie numerari.

**Vbi diffe-** Cæterum etsi nulla differentia ascensionalis superat quadrantem, sed  
**rentiæ as-** minor eo existit, ut plurimum, tamen accidit, ut differentiæ ascensionales  
**ensionales** les in primo quidem seu uernali quadrante zodiaci, in quo sunt auferen-  
**sint mino-** dæ, interdum rectis suis ascensionibus sint minores, interdum æquales,  
**res, æqua-** interdum deniq; maiores. Similiter in ultimo seu hiberno quadrante zo-  
**les, uel ma-** diaci eadem differentiæ ascensionales, additæ rectis suis singulæ ascensio-  
**iores rectis** nibus, uel minores sunt toto circulo, uel ei æquales, uel maiores eodem.  
**suis ascensi** Minores sunt ab initio decliuis spheræ usq; ad eum parallelum, in quo zo-  
**onibus.** diaci polus, seu circulus, ut nunc uocant, arcticus, uoluitur quotidie per  
 uerticem capitis. Æquales uero in hoc ipso parallelo, cuius latitudo æqua-  
 lis est complemento maximæ declinationis ☉. Maiores deniq; ab eodem  
 parallelo usq; ad eam habitationem, in qua mundi polus uerticem capi-  
 tis occupat. Sicut autem ascensiones rectæ partium zodiaci propagatæ à  
 uerna sectione in consequentia paulatim ac suo ordine crescunt, ita etiam  
 augescunt differentiæ ascensionales unà cum declinatione partium signis  
 feri, aliter quidem in alijs climatibus, Vbiq; tamen hac lege, ut quadran-  
 tem circuli non excedant, sed uel retrò, uel porrò per easdem zodiaci de-  
 clinationes ferantur.

**1. Vbi zodi-** Quapropter in omni obliqua spherà, ubi differentiæ ascensionales aufer-  
**aci partes** rendæ quidem minores sunt rectis suis ascensionibus, addendæ uero ñs dem,  
**oriantur** nondum expleant totum circulum dodecatemoria zodiaci, ac singulæ par-  
**recto ordi-** tes eorum recto ac suo ordine emergunt, nempe ut Aries præcedat Tau-  
**ne.** rum, Taurus geminos, & sic consequenter, Id fit, ut dictum est, tantisper  
 donec procedentibus, ab æquinoctiali æquet se altitudo poli complemento  
 maximæ obliquationis ☉. Nam in hoc ipso parallelo, cum differentiæ  
 ascensionales



ascensionales auferendæ sint æquales suis rectis ascensionib. uel his additæ compleant integrum circulum, ideo zodiaci semicirculus euehens Solem, h. e. à trope hiberna numeratus per uernam sectionem usq; ad tropem æstiuam, subito, ac ut uulgo loquuntur, in instanti totus exoritur abq; ulla particula æquinoctialis, ita ut alter zodiaci semicirculus inde recto quidem ordine cum toto æquinoctiali exoriat. 2. Vbi præ posterè.

Postremo in omnibus parallelis, ubi latitudo regionis superat complementum maximæ declinationis ☉, non totus zodiacus in mundi conuersione exoritur, aut occumbit infra horizontem, sed in quolibet parallelo certus illius arcus circa punctum solstitiale semper extat supra horizontem, eiq; æqualis circa punctum brumale premitur sub horizonte. Hi arcus omnes ipso puncto solstitiali et brumali medijs secantur, et extrema eorum puncta utrinq; stringunt horizontem. Cum autem differentia ascensionales auferendæ sint maiores rectis suis ascensionibus, ut in quadrante uernali: uel additæ ipsidem excedant totum circulum, ut in quadrante hiberno, ideo alia zodiaci pars recto ac iusto ordine emergit, alia præposterè. Quantum enim oritur de semicirculo euehente Solem, id totum uenit præposterè in nostrum conspectum. Vt si primum oritur particula quædam ♊, succedit ei Taurus, huic Aries, & ultimo loco extrema particula Capricorni, Vel si primum oritur Taurus, subsequitur hunc Aries, ac postremo loco ♋. De altero semicirculo zodiaci deuehente Solem quantum emergit, id recto atq; iusto ordine ascendit. De occasu contrario modo iudicandum est. Nam quæ iusto ordine exoriuntur, præposterè emergunt, & econtrà.

Fit autem subitus transitus ab uno semicirculo ad alterum per extrema eorum puncta è regione sibi iuicem opposita. Cum enim in semicirculo euehente, cuius posteriores partes in exortu antecedunt priores, ut dictum est, exoritur extremum punctum, ac stringens horizontem ex parte eius arcus, qui semper latet, tunc continuè ac immediatè oritur punctum zodiaci, huic è regione obiectum in semicirculo deuehente, cuius partes omnes, quotquot oriuntur, suo ordine emergunt. Stringit autem & hoc punctum horizontem ex parte eius arcus qui semper adparet. Similiter cum huius semicirculi extremum punctum, ac stringens horizontem uersus eum arcum, qui semper occultus est, oritur, tunc continuè atq; immediate ascendit punctum huic è regione oppositum in semicirculo zodiaci euehente Solem, cuius semicirculi partes præposterè oriuntur. Stringit uero et hoc punctum zodiaci horizontem uersus eum arcum, qui semper adparet. Vt in latitudine regionis 70. grad. post primum gradum ♋ immediate oritur primus gradus ♌, & post 29. gradum ♍ immediate uicesimus nonus Tauri.



Verum hæc, quia partim ex nostris Canonibus patent, partim explicantur alibi copiosius, breuiter hic recitanda duxi.

De climat  
is australi  
bus.

Sed dicet aliquis, quid fiet de climatibus australibus, siquidem hæc præcepta tantum de boreis tradita uidentur. Breuiter respondeo, Quod supra præcepimus differentias ascensionales auferendas esse rectis ascensionibus, per semicirculum borealem, addendas uero per australem, id generaliter sic se habet, Differentiæ ascensionales auferendæ sunt in eo semicirculo zodiaci, qui uergit ad polum æquinoctialis, qui extat supra horizontem, addendæ uero in altero semicirculo, qui uergit ad polum depressum infra horizontem. Nam & sectio æquinoctialis cum zodiaco, quæ nobis habitantibus uersus arcticum polum autumnalis est, uerna fit illis, quibus eminet polus antarcticus, & e contra. Proinde si in nostris canonibus obliquarum ascensionum dodecatemoria è regione sibi inuicem opposita permutaueris, habebis absq; labore canones earundem ascensionum in parallelis austrinis, qui nostris antæci sunt, Vt si ascensionibus dodecatemoriæ V adscripseris dodecatemoriæ  $\cap$ , uel ascensionibus  $\gamma$  dodecatemoriæ M, e contra, deniq; ad hunc modum opposita signa inuicem permutaueris, efficies canones obliquarum ascensionum conuenientes antæcis parallelis. Sunt autem antæci paralleli, quibus oppositi poli æquinoctialis æqualiter attolluntur, uel qui ab æquinoctiali, ut medio, utrinq; æqualiter absistunt.

Canones  
obliquarum  
ascensionum  
Regionum  
montani.

Postremo sciendum est Canones obliquarum ascensionum, quæ à Regionum montano sunt æditæ ab uno gradu usq; ad 60. latitudinis, spectare ad eam Solis obliquationem, quæ maxima est 23. partium cum semisse. Sed nostri Canones reliqui ad quadrantem subiiciunt eam  $\odot$  maximam obliquationem, quæ & omnium minima est, & nostris ferè quadrat temporibus, nempe partium 23. scr. 28'. quæ tamen ab ea, quam sumpsit Regionum montanus, non multum discedit. His igitur Canonibus obliquarum ascensionum utemur in præceptis sequentibus.

36. **PRÆCEPTVM.** Quomodo dati gradus seu puncti Ecclipticæ ascensio obliqua inueniatur, data latitudine regionis.

Vsuecano  
num obli  
quarum as  
censionum

Hactenus de condendis Canonibus obliquarum ascensionum satis iam dictum est. Nunc eorum canonum usus præceptis aliquot summatim monstrandum est: in quibus breuior ero, quod ex superioribus hæc sequentia facillime intelliget attentus lector. Præceptum hoc tale est. Si data regionis latitudo è solis constat gradibus, ingredi Canonem obliquarum ascensionum destinatum illi latitudini, Datum uero zodiaci dodecatemoriæ



tion quære in capite canonis, ac gradum eius in sinistro margine. Communis enim angulus indicabit quæsitam ascensionem, si nulla scrupula gradibus ipsis zodiaci adhæserint. Alioqui enim pars illis scrupulis congruens iuxta sexagenarij rationem, adijcienda est, ut plenè colligas dati puncti zodiaci obliquam ascensionem numeratam à uerna sectione. Sed si data latitudo annexa habet scrupula ipsis gradibus, existit geminus labor. Eo enim modo, quo iam dictum est, quærenda est obliqua ascensio primum ad latitudinem proxime minorem, deinde ad proxime maiorem ac de utriusq; ascensionis differentia capienda pars proportionalis congruens scrupulis latitudinis iuxta sexagenarij rationem, quæ pars uel addenda est, uel auferenda priori ascensioni, pro ut posterior ascensio uel crescit, uel decrescit.

Verbi gratia. Quærat ascensio obliqua 10. partium 2'0. & in regione, quæ latitudinem habet 54. grad. In canone igitur, qui adscriptus est 54. gradibus latitudinis uideo 10. quidem gradibus & competere ascensionem temporum 16. 1'1. undecim uero gradibus ascensionem temporum 16. 4'0. quorum differentia est 29. scrupulorum congruens 60. scrupulis zodiaci. Ideo 20. scrupulis congruunt fere 10. scrupula unius temporis aggreganda temporibus 16. 1'1. Hinc euadit ascensio obliqua temporum 16. 2'1. ferè, quæ quærebatur.

Exempla.

Aliud exemplum. Sit datum punctum zodiaci, desinens, ut prius, in 10 partem 2'0. &, data uero latitudo sit nunc 54. graduum 3'6. Quæritur obliqua ascensio. Primum in latitudine 54. graduum ascendunt cum partibus 10. 20. & tempora 16. 2'1. ut prius. Sed in latitudine 55. graduum ascendunt cum iisdem partibus & scrupulis & tempora 15. 29'. Quarum ascensionum differentia est temporum 0. 52'. competens 60. scrupulis, ac propterea 36. scrupulis, quæ adiacent gradibus 54. competunt scrupula 31'. quæ auferenda sunt à priori ascensione temporum 16. 2'1. eò quod posterior temporum 15. 29'. minor est. Colligitur ergo in hac data regionis latitudine dati puncti ascensio temporum 15. 50'.

Aliud. Sit datum idem punctum zodiaci, ut prius. Data uero latitudo 55. graduum. Ascensio obliqua congruens 10. gradibus & est temporum 353. 57'. at gradibus 11. temporum 353. 43'. ut sit differentia scrupulorum 14. congruens uni gradui. Hinc congruunt 20. scrupulis scrupula ferè 5. auferenda, eò quod posterior ascensio minor est priori. Itaq; cum partibus 10. 20. & ascendunt in data latitudine tempora 353. 52'. numerata à uerna sectione in consequentia. Supra enim dictum est oriri hæc dodecatemoria zodiaci præposterè.

Cæterum in hoc toto calculo secunda scrupula citra iacturam negliguntur



guntur, ita tamen ut si plura fuerint, quàm 30. pro uno scrupulo primo accipiantur.

27. **PRÆCEPTVM.** Ex ascensione obliqua in data regionis latitudine uenandus est gradus seu punctum Eclipticæ cooriens.

Hoc præceptum conuertit antecedens, ac simile est decimo octauo. Ideo sicut antecedens absoluitur ingressu laterali, ita hoc areali. Etsi autem hoc præceptum satis perspicuum est ex superiori præcepto de areali ingressu, tamen non molestum est, quæ supra dicta sunt, breuiter hic repetere. Nam si in area canonis ascensionum datæ latitudinis omnino ac plene inuenies numerum datæ obliquæ ascensionis, habebis extra in capite quidem canonis dodecatemorion zodiaci, sed in margine sinistro gradum illius dodecatemorion, cui hæc obliqua ascensio conuenit. Sed si area canonis non penitus offert numerum datæ ascensionis, sed proxime tum minorem eo, tum maiorem, primum hos proximos duos numeros inuicem confer, quia horum differentia extra uni debetur gradui uel 60. scrupulis, postea etiam a numero datæ ascensionis aufer proxime minorem. Nam si hanc posteriorem ac minorem differentiam multiplicaueris per 1. gradum uel 60. scrupula, ac diuideris in priorem seu maiorem differentiam, colliges scrupula aggreganda gradibus zodiaci. Ut in latitudine 54. grad. sit data ascensio temporum 20. 2' 6. quæro qui gradus zodiaci coascendat. In canone igitur eius latitudinis datam ascensionem non penitus reperio, sed proxime minorem temporum 20. 15'. itemq; maiorem temporum 20. 4' 8. quorum contiguorum numerorum differentia est scrupulorum 33. quibus inter se differunt ascensiones decimi octauæ & decimi noni gradus 8. Superata autem data ascensio temporum 20. 2' 6. suam proxime minorem in canone scrupulis 11. quæ multiplicata in 60. & distributa rursum per 33. ostendunt 20. scrupula aggreganda 18. gradibus 8. Ideo data ascensio in latitudine 54. graduum, competit 18. gradib. 20'. 8.

Quod si latitudo regionis non constat e solis gradibus, plus est laboris, ut in antecedenti præcepto. Verbi gratia in latitudine 54. graduum 4' 0. detur rursum ascensio temporum 20. 2' 6. quæritur punctum Eclipticæ, cuius est hæc ascensio. Primum igitur iuxta monstratam modo rationem reperio in latitudine 54. graduum datam ascensionem congruere gradibus 18. 2' 0. 8. Deinde similiter in latitudine 55. graduum gradibus 20. 1' 7. 8. Ac differentia horum arcuum zodiaci est partis 1. 5' 7. quæ debetur tota uni gradui latitudinis, Sic ergo colloca 60. scrupulis latitudinis, congruunt 117. scrupula zodiaci, quot congruunt scrupulis 40. latitudinis



tudinis. Inuenies autem 78. scrupula, id est, 1. partem 1'8. aggreganda gradibus 18. 20'. ut priori arcui zodiaci. Ideo ascensio data temporum 26. competit gradibus 19. 38. & in latitudine 54. graduum. 40'.

28. **PRAECEPTVM.** Dato quocunq; arcu Eclipticae, quomodo ascensio eius obliqua inueniatur, data regionis latitudine.

Præceptum 26. & 27. monstrant, cum quo puncto zodiaci quod oria- Collatio  
tur punctum æquinoctialis. At hoc 28 & sequens docent, cum quo arcu præcepto  
zodiaci, qui arcus æquinoctialis peroritur, cum initium dati arcus non rum.  
a uerna sectione, sed undelibet sumitur. Est autem hoc præceptum simile  
decimo nono, perinde ut sequens simile uicesimo.

Quæras igitur, sub data latitudine regionis, quam habeat ascensionem Præceptū  
tum initium dati arcus, tum finis eiusdem per 26. præceptum. Harum au- hoc.  
tem ascensionum utraq; cum iuxta canonis rationem numerata sit a uerna  
sectione, si minorem abstuleris maiori, relinquetur arcus æquinoctialis,

qui in data latitudine cū dato zodiaci arcu peroritur. Vt si quærat<sup>r</sup> quan- Exempla.  
tus arcus æquinoctialis cum arcu zodiaci 15. gr. 30'. ascendat in regione,  
cui polus arcticus exaltatur gradibus 54'. Sumatur initium dati arcus zo-  
diaci a 10. gradu 20'. &. Finis igitur eiusdem arcus incidet in 25. gr. 5'0.  
&. Ac per 26. præceptum colligitur primum 10. graduum 20'. & ascen-  
sio temporum 16. 2'1. ac rursum graduum 25. 5'0. & ascensio temporum  
24. 44'. in latitudine scilicet 54. graduum. Quod si priorem ascensionem  
dempseris ex posteriori, uel minorem ex maiori, relinquetur quæsitus ar-  
cus æquinoctialis tem. 8. 23'. quæ metiuntur ortum dati arcus zodiaci.

Aliud exemplum. Sit datus idem arcus zodiaci in latitudine regionis  
5 graduum. Supra autem dictum est, q̄ in his boreis climatis, quicquid  
oritur de semicirculo zodiaci euehente Solem, præpostere oritur, ac recte  
descendit, Contr'a uero quicquid de altero semicirculo deuehente Solem  
oritur, recte quidem oritur, sed præpostere emergitur. Æquinoctialis au-  
tem in omni tractu coeli ut summam æquabilitatem, ita eundem semper  
ortus sui ordinem conseruat. Itaq; de dato arcu zodiaci prius oritur uice-  
simus quintus gradus 50'. &. posterius autem decimus gradus 2'0. &.  
Rursum autem per 26. præceptum in latitudine 5 graduum cum 25.  
gradu 50'. & ascendunt tempora 348. 8'. numerata a uerna sectione in  
consequencia, Similiterq; cum 10. gradu 2'0. & tempora 353. 52'. Harum  
ascensionum differentia temporum 5. 44'. est quæsitus arcus æquinoctia-  
lis, qui metitur præpostere ortum dati arcus zodiaci.

29 **PRAECEPTVM.** Dato arcu æquinoctialis, & dato altero arcus eius  
extremo, qui zodiaci arcus in data obliqua sphaera cum eo peroritur.

Per



Per 27. præceptum inuenias qui zodiaci arcus à uerna sectione numeratus ascendat in data latitudine regionis cum initio dati arcus æquinoctialis, similiter cum fine eiusdem. Ita habebis initium & finem quæsitum arcus Ecclipticæ, Sed si minorem arcum zodiaci reieceris ex maiori, relinquetur quæsitus arcus zodiaci. Vt in latitudine 54. graduum quæraturn zodiaci arcus cooriens cum dato arcu æquinoctialis 8. temporum 2' 3. ita ut initium huius dati arcus sit decimum sextum tempus 21'. à uerna sectione in consequentia. Erit igitur finis eiusdem dati arcus uicesimum quartum tempus 44'. Colligitur autem per 26. præceptum, quod cum 16. temporibus 21'. oriatur 10. gradus 20'. & initium scilicet quæsitum arcus. Similiter cum 24. temporibus 44'. gradus 25. 40'. & finis nimirum quæsitum arcus. Reiectis autem 10. gradibus 20'. & ex 25. gradibus 50. & relinquantur 15. gradus 30'. qui zodiaci arcus oritur cum dato arcu æquinoctialis.

**30. PRAECEPTVM.** Quomodo dati gradus seu puncti Ecclipticæ descensio obliqua, data latitudine regionis, computetur.

**1. Dati gradus descensio obliqua** Cum dato puncto zodiaci descendit punctum æquinoctialis, oppositum ei, quod oritur cum puncto zodiaci, quod dato puncto opponitur. Hinc præcepti huius ac sequentis ratio sumitur. Dato enim puncto zodiaci adde semicirculum, ac collecti arcus, id est oppositi puncti ascensio nem quærito in canone datae regionis per 26. præceptum. Si enim ab hac inuenta ascensione abieceris rursum semicirculum (adsumpto integro circulo, si res postulat) habebis reliquum arcum descensionis numeratum scilicet perpetuo tenore à uerna sectione in consequentia. Vt in latitudine 54. graduum quæraturn, quod punctum æquinoctialis occidat cum 10. gradu 20'. &. Si huic dato arcui zodiaci addideris semicirculum, peruenies ad 10. gradum 20'. M, id est ad oppositum punctum zodiaci. Est autem in latitudine 54. graduum obliqua ascensio decimi gradus 20'. M temporum 239. 2' 9. Vnde abiectis 180. gradibus, id est semicirculo, relinquuntur tempora 59. 2' 9. Quare cum 10. gradu 20'. & descendit 59. tempus 2' 9. scrupulum æquinoctialis numerando à uerna sectione in consequentia.

**2. Dati arcus descensio obliqua** Quomodo autem dati arcus zodiaci descensio obliqua inueniatur, ex hoc præcepto & 28. facile est iudicare.

**31. PRAECEPTVM.** Ex descensione obliqua in data regionis latitudine uenandus est gradus uel punctum Ecclipticæ unà descendens.

Data



Data obliquæ descensioni adde semicirculum, & abijce integrum circulum, si excreuerit. Postea in data regionis latitudine explora, hic collectus uel reliquus arcus æquinoctialis, cuius puncti zodiaci obliqua existat ascensio per 27. præceptum. Quod enim punctum zodiaci huic inuentio opponitur, eius est illa data obliqua descensio. Vt in latitudine rursum 54. graduum fit descensio obliqua data temporum 59. 29'. cui additus semicirculus efficit summam temporum 239. 29'. Est autem hic arcus æquinoctialis obliqua descensio decimi gradus 20'. M, quibus è regione opponitur decimus gradus 20'. 8. Proinde data obliqua descensio in data latitudine pertinet ad 10. gradum 20'. 8.

Exemplū.

Quomodo autem dato quocunque arcu æquinoctialis, & altero eius extremo, exploretur arcus zodiaci una descendens in data obliqua sphaera, facile iudicari potest ex hoc præcepto & uicesimo nono.

32. P R A E C E P T V M. Obliqua ascensio uel descensio cuiusque stellæ inuenienda est, data latitudine regionis.

Cuiusque stellæ obliqua ascensio.

Præceptū.

Primo per uicesimum primum præceptum inuenias rectam ascensionem datae stellæ, hoc est, cuius longitudo & declinatio per decimum tertium præceptum data est. Deinde per uicesimum quartum præceptum inuenias differentiam ascensionalem, quam auferes ascensioni rectæ, si declinatio stellæ fuerit borea, uel addes, si fuerit australis, ut colligas obliquam eius ascensionem. Ad descensionem uero obliquam uenandam contrario modo faciendum est. Differentiam enim ascensionalem addes ascensioni rectæ, si declinatio stellæ fuerit borea, alioqui auferes.

Verbi gratia, Caniculæ, quam stellam *αἰγίου* Græci dicunt, hoc anno Domini 1552. longitudo est partium 98. 37'. 37". ac declinatio australis partium 15. 54'. 1" 6. Hinc per 21. præceptum recta eius ascensio temporum est 96. 56'. 4" 6. At per 24 præceptum in latitudine 54. graduum colligitur differentia eius ascensionalis temporum 23. 5'. 27". quæ, quia declinatio est australis, ascensioni rectæ adiungenda est, ut existat obliqua ascensio, quæ est temporum 120. 2'. 1" 3. Sed ut euadat obliqua descensio, eadem differentia auferenda est, ut fiat obliqua descensio temporum 73. 51'. 19". Subijcio autem tabellam calculi omnium superiorum exemplorum.

Exemplū.

Tabella



# TABELLA Calculi.

|                                                                       | La.<br>re.     | Ascensio<br>recta. | Differētię<br>ascēfiona.       | Ascensio<br>obliqua.               | Descensio<br>obliqua.            |
|-----------------------------------------------------------------------|----------------|--------------------|--------------------------------|------------------------------------|----------------------------------|
| 1. Caniculę ante Chri-<br>stum annis 1322.                            | 31             | tēp. 1 // 63 27 55 | tēp. 1 // 11 41 47             | temp. 1 // 75 9 42                 | tēp. 1 // 51 46 8                |
| 2. Post Christum an-<br>nis 138.                                      | 31<br>52<br>54 | 80 5 29            | 9 45 9<br>21 9 5<br>22 49 53   | 89 50 38<br>101 14 34<br>102 55 22 | 70 20 20<br>58 56 24<br>57 15 36 |
| 3. Post Christum an-<br>nis 1552.                                     | 31<br>52<br>54 | 96 56 46           | 9 51 29<br>21 23 23<br>23 5 27 | 106 48 15<br>118 20 9<br>120 2 13  | 87 5 17<br>75 33 23<br>73 51 19  |
| 1. Pleiadū sequenster<br>minus angustiss. ante<br>Christ. annis 1322. | 36<br>52<br>54 | 9 45 14            | 7 22 38<br>13 4 24<br>14 4 41  | 2 22 36<br>356 40 50<br>355 40 33  | 17 7 52<br>22 49 38<br>23 49 55  |
| 2. Post Christum an-<br>nis 138.                                      | 36<br>52<br>54 | 29 24 50           | 13 36 54<br>24 30 0<br>26 29 0 | 15 47 56<br>4 54 50<br>2 55 50     | 43 1 44<br>53 54 50<br>55 53 50  |
| 3. Post Christum an-<br>nis 1552.                                     | 36<br>52<br>54 | 50 50 21           | 18 58 35<br>34 57 0<br>38 1 35 | 31 51 46<br>15 53 21<br>12 48 46   | 69 48 56<br>85 47 21<br>88 51 56 |

Longitudines uero ac declinationes harum stellarum ac temporum,  
require ex decimo tertio præcepto.

## 33. PRAECEPTUM. Arcus semidiurnus dati loci Solis, uel cuiusq; stellę inueniendus est, data latitudine regionis.

Huius præcepti utilitas hæc est, ut spatia dierum ac noctium cognoscantur, & quantum temporis quælibet stella in quouis hemisphærio consumat. Ac initio considerandum est, quæ stellę uel puncta cæli oriuntur, & occidunt, quæ non item. Stellę semper adparent, quarum borealis declinatio maior est complemento latitudinis regionis, seu altitudinis poli. Nunquam uero in conspectum nostrum ueniunt, sed perpetuo latent stellę, quarum australis declinatio maior est eodem complemento latitudinis. Reliquę stellę omnes oriuntur & occidunt, quarum uel australis uel borealis declinatio minor est eodem complemento, quemadmodum uel ex 23. præcepto satis planum erat, sed eadem repetere non uidebatur otiosum.

Triplex



Triplex autem ratio huius operis proponitur, quarum prima generalis est, reliquæ duæ ad Solem proprie spectant. Iam ut prima intelligi possit, fundamenta eius paulo altius repetenda sunt. Horizon rectus diuidit omnes parallelos per æqualia, quia cum transeat per axem æquinoctialis, iacent in eo centra omnium parallelorum. Obliquus autem horizon parallelos non diuidit per æqualia, quia non transit per centra parallelorum. Ac segmenta borealium parallelorum extantia super horizontem singula suis semicirculis sunt maiora. Contra uero australium segmenta eadem suis singula semicirculis minora sunt. Rursum hæc borealium segmenta dimidiata singula maiora sunt suis quadrantibus, contraque australium segmenta dimidiata singula minora suis quadrantibus. Hi uero excessus uel defectus dimidiatorum segmentorum similes sunt differentiæ ascensionali, per quod parallelus ipse describitur per propositionem 14. secundi sphaericorum Theodosij.

Triplex  
forma operis  
eu cal-  
culi.

Iam ex his, sequentis præcepti ratio plane intelligitur. Nam per 24. præceptum inuenias differentiam ascensionalem dati puncti siue Eclipticæ siue alterius cuiuscunque. Hanc si uel adieceris quadrantæ dato puncto declinante in austrum, uel abstuleris quadrantæ eodem puncto uergente in austrum ab æquinoctiali, conflabis arcum semidiurnum dati puncti.

Prima forma.

Repetantur exempla antecedentia. Pleiadum angustissimus terminus sub latitudine regionis 54. graduum habuit differentiam ascensionalem temporum quidem 14. 4'. 4" 1. ante Christum annis 1322. sed temporum 26. 2' 9. 0". post Christum annis 138. annis uero post Christum 1552 temporum 38 1'. 3" 5. Hæc differentiæ ascensionales adiungendæ sunt singulæ quadrantæ, eò quod declinationes sunt boreales. Arcus igitur semidiurnus angustissimi termini pleiadum fuit temporum 104. 4'. 4" 1. ante Christum annis 1322. sed post Christum annis quidem 138. temporum 116. 29'. 0". annis uero 1552. temporum 128. 1'. 3" 5. Vides quomodo hætenus hic semidiurnus arcus acreuerit.

Hæc prima ratio uniuersaliter ad omnia cœli puncta, at sequentes duæ proprie ad locum Solis, uel partes Eclipticæ pertinent, quarum prior hæc est. Dati puncti zodiaci obliquam ascensionem quaerito iuxta 26. præceptum. Similiter & puncti è diametro oppositi, auferatque prioris ascensionem ab ascensione posterioris adsumpto integro circulo, si res postulat. Sic enim relinquetur integer arcus diurnus, cuius dimidium ostendit semidiurnum.

Secunda.

x 2 Vt



Vt si libeat inuenire arcum semidiurnum principij II sub latitudine 54. graduum. Primum ascensio obliqua principij II est temporum 27.22. Puncti autem ex diametro oppositi nempe principij I obliqua ascensio temporum est 268.14. Reliquus igitur arcus diurnus temporum est 240.52. ac propterea semidiurnus temporum 120.26. Pendet autem & hæc altera ratio ex fundamentis primæ, quemadmodum alibi & in primis elementis huius doctrinæ traditur.

**Tertia.**

Tertia autem forma huius calculi prærequirit Canonem rectarum ascensionum, quæ incipiunt non à uerna sectione, sed à puncto brumali, uel principio I. Hanc facile ita comparabis, si ascensionibus rectis singulis Canonis incipientis à uerna sectione adicias quadrantem, & prioribus reponas locis abiecto integro circulo, quoties opus est. Postquam igitur hic canon rectarum ascensionum in promptu est, subtrahe dati puncti zodiaci obliquam ascensionem ab ascensione eius recta, adsumpto integro circulo, si usus postulat. Ita enim relinquetur arcus semidiurnus. Exemplo nihil hic opus esse censeo.

Ratio autem huius tertiæ formæ sic percipi potest. Siue enim per semicirculum zodiaci australem quadrantem auferas differentiam ascensionalem, & addaseandem quadrantem per semicirculum borealem, siue à recta ascensione addito quadrante uniuersaliter auferas obliquam, eundem existeret numerum oportet. Nam & per australem semicirculum differentia ascensionalis addita est rectæ ascensioni, & per boreum ablata, ut obliqua existeret ascensio.

Haftenus ergo triplicem formam inuestigandi arcum semidiurnum monstrauius. Quod si expetis seminocturnum, aufer inuentum semidiurnum ex semicirculo, hoc est, ex 180. temporibus. Reliquus enim fiet arcus seminocturnus, Quorum utrumque si duplicaueris, habebis integros arcus diurnum scilicet & nocturnum. Verum ut hos inuentos arcus commutes in horas, & horarum scrupula, sciendum est 15. tempora competere uni horæ æquinoctiali. Hinc unum tempus decima quinta pars est horæ æquinoctialis. Ac hora in 60. scrupula distributa more astronomico, ualebunt singula tempora 4. scrupulis horæ, ac 15. scrupula temporalia uno scrupulo horario. Quare si tempora alicuius horum arcuum diuiseris in 15. conflabis integras horas, similiter si scrupula temporis diuiseris in 15. & reliquos gradus extenderis per 4. colliges scrupula horaria. Vt si arcus semidiurnus fuerit temporum 120.26. primum tempora diuisa in 15. exhibent horas 8. nullo tempore reliquo, sed duntaxat scrupulis 26. temporalibus, quæ exhibent scrupula 1.44. horaria. Erit igitur dimidiata magnitudo, uel mora stellæ in superiori hæmisphærio horarum æquinoctialium.



lium 8. scrupulorum 2. ferè. Secunda enim ut prius dictum est, iure negliguntur. Velsi differentiam ascensionalem distribueris in 15. habebis horas, & horarum scrupula senis horis addenda uel auferenda, pro ut declinatio stellæ fuerit septentrionalis, uel australis.

Etsi autem nostro tempore, cum horas dicimus in communi sermone, semper intelligimus has æquinoctiales, tamen apud ueteres aliæ fuerunt in usu, quas propterea Plinius, ut discerneret ab æquinoctialibus, uulgares nominat, græci *καιριναι*, id est temporales. Est autem hora temporalis, cuiusq; diei uel noctis duodecima pars. Quare sicut tum dies ipsi, tum noctes inter se sunt inæquales, ita & temporalium horarum spacia subinde uariari oportet. Iam ut explores spacium horæ temporalis, arcum semidiurnum, uel seminocturnum partire in 6. uel totum diurnum, itemq; nocturnum in 12. Sic enim adparebit, quot tempora congruant uni horæ temporalis uel diurnæ, uel nocturnæ. Vt si arcum semidiurnum temporum 120. 2' 6. partiamur in 6. existet hora temporalis diurna temporum 20. scr. 4. ferè, quæ faciunt unam horam æquinoctialem scrupula 20. 1' 6. Ideoq; temporalis nocturna temporum est 9. scr. 5' 6. hoc est, scrupulorum 39. 4' 4. unius horæ æquinoctialis. Semper enim hora temporalis diurna cum sua nocturna æquat se duabus horis æquinoctialibus, id est, temporibus 30. Vel si differentiam ascensionalem distribueris in 6 & numerum nascentem adiunxeris 15. temporib. sub declinatione septentrionali, uel ipsdem abstuleris sub australi, conflabis horam temporalem.

Tabellam uero calculi omnium superiorum exemplorum paulo post subiiciemus.

34. **PRÆCEPTVM.** *Quantum interiectum sit temporis inter exortus & obitus duorum punctorum cœli, uel eiusdem etiam puncti in data regione.*

Quantum temporis intercedat inter duarum stellarum tam exortus quàm obitus, sic addisces facillime. Per 32. præceptum habeas obliquas ascensiones ac descensiones duarum stellarum seu punctorum cœli. Minorem aufer à maiori, uel priorem à posteriori. Sic enim relinquetur arcus æquinoctialis, qui emergit ab exortu stellæ, cuius minor est obliqua ascensio usq; ad exortum alterius, cuius maior est obliqua ascensio numerata scilicet à uerna sectione. Quod si hunc arcum æquinoctialis reieceris ex toto circulo, relinquetur arcus æquinoctialis, qui ascendit ab exortu stellæ, cuius maior erat obliqua ascensio numerata à uerna sectione usq; ad exortum stellæ alterius, cuius minor erat ascensio numerata ab eodem principio. Æquinoctialis enim circulus in omni sphaera oritur occiditq;

u 3 recte

De tēpore  
interiecto  
inter ortus  
& obitus  
duarū stel-  
larum.



recte ac suo ordine, non præposterè, ut alicubi nonnullæ partes zodiaci. Hos igitur inuentos arcus facile commutaueris in horas, ut quæsito satis fiat. Quod autem de obliquis ascensionibus dictum est, similiter accipiat de obliquis descensionibus.

**Exemplū  
de obliquis  
ascensionibus.**

Exemplum de ascensionib. obliquis. Hoc nostro tempore sub latitudine 54. graduum obliqua ascensio angustissimi termini pleiadum est temporum 12. 48'. 4". 6. Caniculæ uero temporum 120. 2'. 13". Iam minori ascensione ablata à maiori, existit differentia temporum 107. 13'. 2". 7. Hic arcus æquinoctialis exoritur ab ortu pleiadum usq; ad ortum Caniculæ. Sed ab ortu Caniculæ ad ortum pleiadum oritur reliquum de toto circulo, uidelicet tempora 252. 46'. 33". Faciunt autem tempora 107. 13'. 2". 7. horas 7. scr. 9'. ferè, sed tempora 252. 46'. 33". horas 16. scr. 51'. ferè.

**Exemplū  
de obliquis  
descensionibus.**

Exemplum de obliquis descensionib. Caniculæ obliqua descensio est temporum 73. 51'. 1". 9. pleiadum uero 88. 51'. 5". 6. Canicula igitur citius occidit, quàm pleiades temporib. 15. 0'. 3". 7. id est, una hora integra. Ergo si ab occasu pleiadum numeres ad occasum Caniculæ, inuenies horas 23. reliquas scilicet de toto die naturali. Ac uel in hoc exemplo adparet interdū accidere, ut stella prius oriens tamen posterius occidat, quàm altera, ad quam comparatur. Citius enim oriuntur pleiades quàm Canicula 7. horis & 9. scr. & tamen canicula integra hora antecedit occasum pleiadum. Id eò fit, quia stellæ boreales oriuntur cum priorib. temporib. æquinoctialis, & occidunt cum posteriorib. Australes autem ascendunt cum posterioribus temporibus, ac merguntur cum prioribus. Boreales autem & australes stellæ hic intelligantur nō latitudinis ratione, uerum declinationis.

**De tempore.**

Tempus autem interiectum inter ortum & occasum eiusdem stellæ prodest arcus stellæ diurnus, quemadmodum ex antecedenti præcepto satis patet. Vt arcus semidiurnus caniculæ sub latitudine 54. graduum est temporum 66. 54'. 33". ac proinde integer diurnus temporum 133. 49'. 6". quæ faciunt horas 8. scrupula 55'. ferè. Tantum intercedit temporis inter ortum & occasum Caniculæ. Sed inter occasum & ortum horæ intercedunt 15 scr. 5'. reliqua scilicet de horis 24.

**De ortu et  
occasu eiusdem  
stellæ.**

Quod si scire uoles, quantum temporis sub una eademq; latitudine regionis intercedat inter ortum unius stellæ, et occasum alterius, uel contra, has sequere regulas. Si descensionib. obliquis unius stellæ semicirculus adiungitur, & à summa auferatur ascensio alterius, reliquus fit arcus æquinoctialis inter ortum huius, & occasum illius interiectus. Sed si ascensionib. obliquis unius additus fuerit semicirculus, & à summa auferatur descensio alterius, relinquitur arcus compræhensus inter occasum huius, & ortum illius. Repetantur proxima exempla Caniculæ & pleiadum. Semicirculus



circulus igitur additus oblique descensioni pleiadum facit summam tem-  
 porum 268. 51'. 5" 6. a qua summa si reiecta fuerit ascensio obliqua Cani-  
 culæ, relinquitur arcus compræhensus inter ortum Caniculæ & occas-  
 sum pleiadum, temporū scilicet 148. 49'. 4" 3. Semicirculus autem addi-  
 tus obliquæ ascensioni Caniculæ efficit summam, unde si reijciatur obli-  
 qua descensio pleiadum relinquitur arcus æquinoctialis compræhensus  
 inter occasum pleiadum & ortum caniculæ, uidelicet temporum 211. 10.  
 17'. quæ deerant usq; ad integrum circulum temporib. 148. 49'. 4" 3. Si-  
 militer semicirculus additus obliquæ descensioni Caniculæ, conflatur sum-  
 mam temporum 253. 51'. 1" 9. unde ablata obliqua ascensio pleiadum re-  
 linquit arcum æquinoctialis compræhensum inter ortum Pleiadum &  
 occasum Caniculæ temporum 241. 2'. 3" 3. At obliquæ ascensionis pleia-  
 dum additus semicirculus facit summam temporum 192. 48'. 4" 6. unde  
 ablata obliqua ascensio Caniculæ reliquum facit arcum intersectum inter  
 occasum Caniculæ & ortum Pleiadum temporum 118. 57'. 2" 7. quantū  
 scilicet deerat ad absoluendum integrum circulū temporibus 241. 2'. 3" 3.

35. **P R A E C E P T U M.** Dato loco Solis qua hora diei uel no-  
 ctis qualibet stella oriatur uel occidat in  
 data regione.

Horas nunc intelligimus non temporales, sed æquinoctiales, quæ not. 1. De Sole.  
 stro sæculo in usu sunt. Ac de ☉. quidem facilima res est. Arcus enim se-  
 midiurnus, commutatus in horas, ostendit quota hora post meridiem sol  
 occumbat, Eæq; horæ ablatae ex 12. ostendunt, quota hora à medio no-  
 ctis Sol exoriatur. Vt si ☉ teneat principium II, arcus eius semidiurnus  
 in latitudine 54. grad. est temp. 120. 2' 6. quæ faciunt horas 8. scrupula 2'.  
 ferè. Occidit ergo Sol completis à meridie horis 8. scrupulis 2. & oritur à  
 medio noctis horis tribus scrupulis 58'.

Sed in cæteris stellis negotium est intricatius. Primum enim inuenias 2. De cæte-  
 dati loci ☉ ascensionem tum descensionem obliquam in data regione per ris stellis.  
 28. et 30. præcepta. Similiter et stellæ obliquam ascensionē et descensionē  
 per 32. Habeas etiam arcum ☉ semidiurnum & seminocturnum per 33. Tēpus ora-

Iam ad explorandum tempus ortus stellæ ascensionem obliquam ☉  
 aufer ab ascensione obliqua stellæ adsumpto integro circulo, si usus po-  
 stulat. Nam si hæc differentia minor est arcu diurno Solis, oritur stella  
 interdiu, sin maior est, nocte oritur. Iam ut diei uel noctis horam,  
 qua stella oritur, cognoscas, adde huic differentiae arcum Solis semi-  
 nocturnum. Ac primum, si potes, abijce integrum circulum. Si enim nihil  
 remanserit, oritur stella medio noctis, Si uero reliquus arcus minor fuerit  
 semicirculo



semicirculo, commutatus in horas, ostendet quot horis stella oriatur post medium noctis. Sed si semicirculo maior fuerit, rursus abiecto semicirculo reliquus arcus in horas commutatus ostendet, quota hora præterierit à meridie oriente stella. Vt in latitudine regionis 54. grad. teneat rursus ☉ initium II, cuius obliqua quidem ascensio temporum est 27. 2'. 2. descensio uero temporum 88. 14'. Arcusq; semidiurnus ☉ temporum 120. 26. ac propterea seminocturnus temporum 59. 34. Ac quærat, qua hora diei uel noctis oriatur angustissimus terminus Pleiadum nostra ætate. Huius ascensio obliqua est temporum 12. 49'. ferè, ac descensio temporum 88. 52'. ferè. Obliqua igitur ascensio ☉ ablata ex obliqua ascensione Pleiadum relinquit tempora 345. 27. cui arcui additus seminocturnus colligit tempora 405. 1'. Abiectus autem totus circulus reliquum facit arcum temporum 45. 1'. qui minor semicirculo ac commutatus in horas indicat à medio noctis usq; ad ortum stellæ effluxisse horas 3. 0'.

*Aliter.*

Vel utere hac ratione. Arcum solis semidiurnum, similiter & differentiam ☉ ac stellæ cummutata in horas inuicem adde. Ab hac summa, si potes, abijce 24. Si nihil remanserit, stella oritur medio noctis. Si horæ pauciores fuerint reliquæ quàm 12. hic numerus indicat quota hora à medio noctis præterierit oriente stella. Si plures fuerint, abiectis rursus 12. reliquæ indicant, quotam horam Sol transegerit à meridie ascendente iam stella.

*Tempus  
occasus  
stellæ.*

Sed ad explorandum tempus occasus stellæ aufer similiter descensionem obliquam ☉ à descensione obliqua stellæ adsumpto integro circulo, si usus poscit. Reliquus enim arcus differentiæ, si minor est arcu nocturno Solis, stella nocte mergitur, alioqui interdiu. Ad cognoscendam autem horam occasus, si arcus differentiæ minor est seminocturno, adde ei arcui differentiæ semidiurnum Solis. Collectus enim arcus in horas commutatus ostendit, quot horæ à meridie transierint descendente stella. Sed si arcus differentiæ æqualis est seminocturno stella occidit medio noctis. Si deniq; maior fuerit seminocturno, abijce inde semidiurnum. Reliquus n. arcus, si quidem minor fuerit semicirculo, patefaciet, quota hora post medium noctis stella occidat, sed si maior fuerit, abiecto semicirculo, reliquus similiter monstrabit, quota hora à meridie stella petat occasum. Vt in prior exemplo descensio obliqua Solis temporum 88. 14'. ablata descensionem obliquæ pleiadum temporum 88. 52'. relinquit tempus 0. 38'. quæ addita arcui semidiurno solis temporum 120. 26. colligunt tempora 121. 4'. id est, horas 8. scrupula 4. ferè. Tantum temporis præterijt à meridie occidentibus pleiadibus.

Vel, si mauis, mox traducito arcum differentiæ & semidiurnum nocturnumq;



et unumque in horas & earum scrupula. Quod si inuentus arcus differentiæ pauciores horas facit, quàm seminocturnus ☉, adde arcui differentiæ horas semidiurni arcus ☉, ut colligas horas à meridie elapsas usque ad occasum stellæ. Sed si horæ arcus differentiæ æquant se horis arcus seminocturni ☉, stella occidit medio noctis. Si denique horæ eiusdem arcus differentiæ plures fuerint horis arcus seminocturni, ablatiis horis seminocturni, habebis reliquas horas, quæ occidente stella præterierunt à medio quidam noctis, si fuerint pauciores 12. sed à meridie, si fuerint plures, abiectis tamen prius duodecim.

Quod si quis horas ortus & occasus stellæ, malit numerare non à meridie & medio noctis, sicut usitatum est Astronomis, sed ab ortu & occasu ☉, quod quibusdam regionibus familiare est, is hæc eadem ferè sequutus uestigia, propositum suum facile adsequetur, id quod cuiusque sagacitati permittimus.

36. **PRÆCEPTVM.** Quod punctum Eclipticæ cum qua-  
uis stella oriatur uel occidat in data  
latitudine.

Per 32. præceptum inuenias datæ stellæ ascensionem & descensionem obliquam. Inde per 27. quidem præceptum gradum Eclipticæ inuenies ascendentem; per 31. autem, gradum eiusdem descendente. Breuiter res-  
*Ortus et occasus cuiusque stellæ.*  
peto exemplum ex superioribus. Angustissimi termini pleiadum hoc anno & in latitudine 54. graduum obliqua ascensio est temporum 12.4'9. ferè, Descensio temporum 88.52'. ferè per 31. præceptum. Quare per 27. præceptum oritur cum parte 2.4'3.8, & per 31. occidit cum parte 0.2'6. II. Hi ortus & obitus stellarum inerrantium non mutantur, nisi longissimo temporis tractu propter tardissimum earum motum. Subijcio autem tabellam calculi omnium superiorum exemplorum, in quibus considerandæ sunt notissimæ regulæ. Boreales stellæ oriuntur cum prioribus partibus zodiaci, & occidunt cum posterioribus. Australes uero stellæ ascendunt cum posterioribus, ac merguntur cum prioribus. Boreales autem & australes stellæ hic intelligantur ratione latitudinis non declinationis, uel quatenus referuntur ad eclipticam, seu planum Solis, non ad æquinoctialem.  
*Boreales et australes stellæ*



|                                                          | g<br>lat. | Ascensio<br>obliqua | Descensio<br>obliqua | Oriebatur<br>cum | Occidebat<br>cum | Arcus<br>fermiur. |
|----------------------------------------------------------|-----------|---------------------|----------------------|------------------|------------------|-------------------|
| 1. Caniculæ ante Christum annis 1322.                    | 31        | temp. / 75 10       | tép. / 51 46         | grad. / 0 18 ☿   | grad. / 13 50 ☿  | temp. / 78 18     |
| 2. Post Christum annis 138.                              | 31        | 89 51               | 70 20                | 13 31 ☿          | 29 40 ☿          | 80 15             |
|                                                          | 52        | 101 15              | 58 56                | 5 22 ☿           | 10 53 ☿          | 68 51             |
|                                                          | 54        | 102 55              | 57 16                | 8 0 ☿            | 8 20 ☿           | 67 10             |
| 3. Post Christum annis 1552.                             | 31        | 106 48              | 87 5                 | 27 48 ☿          | 14 1 ☿           | 80 9              |
|                                                          | 52        | 118 20              | 75 33                | 17 3 ☿           | 22 39 ☿          | 68 37             |
|                                                          | 54        | 120 2               | 73 51                | 19 20 ☿          | 20 4 ☿           | 66 55             |
| 1. Pleiadum termini angustiss. ante Christum annis 1322. | 36        | 2 23                | 17 8                 | 3 47 V           | 14 11 V          | 97 23             |
|                                                          | 52        | 356 41              | 22 50                | 21 50 X          | 15 58 V          | 103 4             |
|                                                          | 54        | 355 41              | 23 50                | 18 19 X          | 16 14 V          | 104 5             |
| 2. Post Christum annis 138.                              | 36        | 15 48               | 43 2                 | 24 55 V          | 5 14 ☿           | 103 37            |
|                                                          | 52        | 4 55                | 53 55                | 12 15 V          | 7 26 ☿           | 114 30            |
|                                                          | 54        | 2 56                | 55 54                | 8 11 V           | 7 45 ☿           | 116 29            |
| 3. Post Christum annis 1552.                             | 36        | 31 52               | 69 49                | 17 11 ☿          | 27 9 ☿           | 108 59            |
|                                                          | 52        | 15 53               | 85 47                | 6 21 ☿           | 29 55 ☿          | 124 57            |
|                                                          | 54        | 12 49               | 88 52                | 2 43 ☿           | 0 26 II          | 128 2             |

37. PRAECEPTVM. Dies, quo fiat stellæ ortus & obitus matutinus uel uespertinus, explorandus est.

Vulgo uocant Cosmicum ortum & occasum stellæ, qui fit mane sub ipsum exortum Solis. Acronichum uero ortum & occasum, qui fit uespere eo momento temporis, dum Sol mergitur infra horizontem. Necesse est autem stellam mane cum Sole oriri quidem, quando Sol transit eam partem zodiaci, quæ ascendit pariter cum stella: occidere autem, cum Sol transit partem Eclipticæ oppositam ei parti, cum qua stella mergitur. Similiter oportet stellam uespere occidente Sole ascendere quidem supra horizontem, quando Sol tenet partem oppositam ei, cum qua stella euehitur. Mergitur autem ex conspectu nostro abire tunc, quando Sol uehitur in ea parte Eclipticæ, cum qua stella petit occasum. Verbi gratia, Nostra ætate in latitudine 54. graduum Canicula oritur cum parte 20. ☿, occidit cum parte 21. ☿ ferè. Ideo Canicula mane oritur quidem, cum Sol uehitur in uicesima parte ☿, occidit uero, cum uehitur in 21. parte ☿. Similiter uespere oritur quidem, cum Sol uersatur in parte 20. ☿, occidit autem Sole



Sole hærente in parte 21.  $\gamma$ .

Quo autem die cuius mensis sol transeat hanc uel illam partem zodiaci De loco Soci, petendum est uel de tabulis cœlestium motuum uel ex Ephemeridibus.

Hos ortus atq; obitus stellarum Cosmicos & Acronychos uulgo etiam ueros adpellant, quia simpliciter pertinent ad horizontem, qui conspectam mundi partem dirimit ab inconspicua. Sed alij sunt, quos uocant adparentes & heliacos, quia ad Solem & ad uisum nostrum referuntur, de quibus consulatur propositio 61. primi mobilis Regionum montani.

Ortus et occasus heliaci.

38. P R A E C E P T V M. Ex dati puncti zodiaci data declinatione. exploranda est maxima Solis obliquatio.

Per 4. præceptum quære sinum tum declinationis datæ, tum eius arcus Eclipticæ, qui à dato puncto numeratur ad proximam sectionem duorum circulorum zodiaci æquinoctialis. Ac sinum declinationis multiplicatum in totum sinum partire in reliquum. Sic enim existet sinus maximæ declinationis  $\odot$ , Ut initium dodecatemorii  $\gamma$  declinet ab æquinoctiali partibus 11. 29'. 5". Huius sinus est 1991069. qui multiplicatus in totum sinum diuidendus erit. Distat autem initium  $\gamma$  à uerna, ut proxima sectione gradibus 30. 0'. quorum sinus est 5000000. diuisor scilicet.

Sinus igitur maximæ declinationis 3982138. ac per 5. præceptum ipsa maxima zodiaci circuli declinatio partium 23. 28'. 0". quanta fere est nostro tempore. Quod si sumas initium eiusdem dodecatemorii  $\gamma$  declinare partibus 11. 30'. 1" 8. inuenietur similiter maxima Solis obliquatio, quæ fit in duobus punctis solstitialibus grad. 23. 52'. 0". quanta Christi & Ptolomæi sæculo propemodum fuit.

39. P R A E C E P T V M. Data differentia ascensionali, & data declinatione stellæ uel puncti, cuius est illa differentia, inuenienda est congruens latitudo regionis.

Sinum differentia ascensionalis multiplicatum in totum diuide per numerum excerptum e fœcundo canone, per arcum declinationis dati puncti. Ita enim habebis numerum quærendum in fœcundo Canone, qui numerus exhibet poli altitudinem.

Ut sit data nostro tempore Pleiadum declinatio partium 24. 6. 42. Differentia uero ascensionalis partium seu temporum 38. 1'. 3" 5. Huius arcus sinus est 6160230. qui multiplicatus in totum fit diuidendus. At e fœcundo canone per arcum declinationis colligitur hic numerus 4475660.

$\lambda$  2 diuisor



diuisor scilicet. Numerus igitur existit è diuisione particulari 13763820.  
Hic quæsitus in fœcundo, ostendit ipsam poli altitudinem 54. graduum.  
In hac igitur latitudine regionis pleiades hoc nostro tempore habent dif-  
ferentiam ascensionalem, quanta dabatur.

*Due insig-  
nes utilita-  
tes huius  
præcepti.*

Huius autem præcepti inter cæteras duæ sunt insignes utilitates, quarum prior est, Quomodo ex longissimo die, aut breuissimo inueniatur latitudo regionis. Posterior autem manans è priori, Quomodo ad quamlibet mundi ætatem, seu ad quamlibet Solis maximam obliuationem construenda sit de integro tabula climatum & parallelorum. Id autem ex uno exemplo intelliget sagax lector. Vt si ad hoc nostrum tempus inueniendum sit, in qua latitudine sit longissimus dies, horarum 15. uel breuissimus horarum 9. Maxima Solis obliuatio congruens longissimo die ei est partium 23. 28'. 3". Huic competit numerus è fœcundo Canone 4343403. futurus diuisor in hoc calculo. Deinde quia longissimus dies datur uel sumitur horarum 15. erit dimidiatus horarum 7. cum semisse. Ideo iuxta doctrinam supra initio 32. præcepti traditam, differentia ascensionalis horæ unius cum semisse, id est, temporum 22. 30'. 0". Hius finis colligitur 3826834. qui multiplicatus in totum sinu, id est 10000000. particulas, fit numerus diuidendus, quo distributo in priorem diuisorem 4343403. existit hic numerus 8810681. qui in area fœcundi canonis quæsitus ostendit poli altitudinem, seu latitudinem regionis grad. 41. 22'. 5". Ad hunc igitur modum dato uel sumpto longissimo die, ut explores, cui latitudini regionis competat, primum inuenies differentiam ascensionalem, uidelicet, si dimidiatum diem contuleris ad 6. horas. Deinde sequeris calculum huius præcepti.

Quod si denuo condere libeat tabulam climatum & parallelorum, quia climata semissibus, paralleli uero quadrantibus horarum distinguuntur, initio sumes differentiam ascensionalem semissem unius quadrantis horæ, id est, temporis 1. 52'. 3". ac secutus superiorem calculi rationem elicies latitudinem regionis congruentem secundo parallelo. Primus enim parallelus habetur ipse æquinoctialis. Inde si sumpseris duplum huius differentię ascensionalis, id est, tempora 3. 45'. 0". cognosces cui latitudini debeat tertius parallelus. Quod si ita continue auxeris differentiam ascensionalem semisse unius quadrantis, id est, tempore 1. 52'. 3". colliges paulatim nouum Canonem parallelorum, donec longissimus dies occupet totum spatium diei naturalis, id est, 24. horas, uel donec differentia ascensionalis extendat se ad quadrantem circuli. Numerus autem desumptus è fœcundo Canone per declinationem Solis maximam, fœgens munere diuisoris, semper manet idem.



40. PRAECEPTVM. Data differentia ascensionali, & data latitudine regionis, inuenienda est congrua declinatio.

Hoc praeceptum conuersum est ex antecedenti. Sinum igitur differentiae ascensionalis multiplicatum in totum sinum diuide per numerum latitudinis excerptum è foecundo Canone. Existens enim numerus rursus è foecundo, suppeditat quaesitam dati puncti declinationem. Vt in latitudine 54. graduum, sit differentia ascensionalis pleiadum graduum 38. 1'. 3" 5. Huius differentiae sinus est 6160230. qui multiplicatus in totum sinum, euadit diuidendus. Numerus autem 54. gradibus latitudinis congruens è foecundo, est 13763820. diuisor scilicet. Ex partitione autem existit hic numerus 4475669. qui rursus illatus in foecundum, monstrat gradus 24. 6'. 4" 2. quaesitam uidelicet declinationem pleiadum.

41. PRAECEPTVM. Data maxima Solis obliuatione, & data latitudine regionis, inueniendus est arcus Eclipticae semper adparens.

Hoc praeceptum pertinet ad absoluendam tabulam climatum & parallelorum quam antea perduximus sub eam altitudinem poli, in qua dies unus existit sine nocte, & uicissim nox una sine die. Vt autem aliquis zodiaci arcus semper extet supra finitorem seu horizontem, necesse est complementum latitudinis regionis minus esse maximae eius temporis obliuatione Solis.

Sinum igitur complementi datae latitudinis multiplica in totum, inde emergentem numerum partire per sinum maximae obliuationis. Existet enim sinus, cuius arcus complementum ad quadrantem dimidium est adparentis arcus zodiaci. Vt hac nostra aetate maxima ☉ obliuatio est partium 23. 28'. 3" 2. cuius sinus 3983578. diuisor scilicet perpetuus, quantacumque latitudo loci sumatur. Sit autem nunc latitudo 70. graduum, quaerendus est arcus zodiaci semper adparens. Complementum latitudinis est 20. graduum, cuius arcus sinus est 3420201. qui primum multiplicatus in totum sinum, ac inde diuisus in 3983578. gignit hunc sinum 8585751. cuius arcus est partium 59. 9'. 2" 5. Huius uero complementum ad quadrantem est partium 30. 50'. 3" 5. dimidium scilicet adparentis arcus, qui duplicatus exhibet totum arcum adparentem partium 61. 41'. 1" 0. Constat autem ex primis elementis huius doctrinae, quod, quantus zodiaci arcus circa punctum solstitiale semper extat supra horizontem, tantus è regione circa brumale punctum perpetuo demersus est. Vt in latitudine 70. graduum perpetua lux est à parte 29. 5'. 2" 5. usque ad partem

λ 3 0.50'.

Vsus huius  
praecepti.



0.50'.3".5. N. similiter perpetua nox à parte 29.5'.2".5.M, usq; ad partem 0.50'.3".5. ~~33~~.

**Datēpore.**

Quot autem diebus & horis Sol perambulet hos arcus zodiaci auul-  
fos ab horizonte, petendum est uel ex tabulis motuum, uel ex Ephemeris  
dibus.

42. **PRÆCEPTVM.** Data maxima Solis obliuatione, & dato arcu zodiaci  
adparente, inuenienda est latitudo regionis.

**Vsus huius  
præcepti**

Est & hoc præceptum conuersum ex antecedenti, & usus eius est, ut ex  
perpetua luce certi temporis poli altitudo cognoscatur. Ex eo spacio  
enim temporis, quo Sol non occidit, prudens Logista æstimare potest ar-  
cum zodiaci semper adparentem. Initium enim arcus adparentis sumen-  
dum est, non cum primum dies esse incipit sine ulla nocte, sed cum cen-  
trum corporis ☉ uersatur in ipso horizonte. Ita etiam finis eiusdem ar-  
cus adparentis intelligatur non cum ultimus dies est sine nocte, sed cum  
centrum corporis ☉ rursum in plano horizontis circumuoluitur.

Dato igitur arcu adparenti, quære sinum complementi dimidiati illi-  
us arcus, eumq; in sinum maximæ obliuationis ☉ multiplicato. Emer-  
gens enim numerus, si diuidatur in totum, exhibebit sinum, cuius arcus  
complementum est quæ sita latitudo regionis. Vt sit adparens arcus par-  
tium 61.41'.1".0. cuius dimidium est partium 30.51'.3".5. & huius uicis-  
sim complementum ad quadrantem 59.9'.2".5. cuius sinus est 8585751.  
Sinus autem maximæ obliuationis, ut prius, 3983578. qui duo sinus in-  
uicem multiplicati, abiectis 7. primis figuris ad dexteram exhibent hunc  
sinum 3420201. cuius arcus est graduum 20.0'. quorum complementum  
est 70. Quæ sita igitur latitudo regionis est graduum 70.

43. **PRÆCEPTVM.** Dato loco Solis & altitudine eius me-  
ridiana, inuenienda est latitudo regionis.

Initio sciendum est in hoc & sequentibus præceptis requiri datam ☉  
maximam obliuationem. Præceptum autem hoc sic expeditur. Inueni-  
as dati loci Solis declinationem per 10. præceptum, quam addes altitu-  
dini ☉ meridiane, si declinatio fuerit australis, uel aufer si borealis. Hoc  
enim pacto conflabis arcum meridiani circuli, qui inter horizontem &  
æquinoctialem compræhenditur, cuius arcus complementum ad qua-  
drantem est quæ sita latitudo regionis. Vt sit in minima ☉ obliuatione  
partium 23. scr. 28. locus Solis octauus gradus dodecatemorii II, & alti-  
tudo eius meridiana partium 57.4'0. quæritur latitudo regionis. Per 10.  
præceptum colligitur declinatio ☉ borea partium 21.4'0. ferè, quæ abla-  
ta ab altitudine meridiana partium 57.4'0. relinquit partes 36.0'. cuius  
complementum



complementum ad quadrantem est quæ sita altitudo poli partium 54.0'.

Cæterum ad huius præcepti usum datur Solis locus per calculum ex nostris tabulis Prutenicis, Altitudo uero Solis meridiana per obseruationes, quæ fiunt astrolabio, quadrante, aut similibus instrumentis.

44. **PRÆCEPTUM V. M.** Dato loco Solis & latitudine regionis, inuenienda est altitudo eius meridiana.

Inuenias dati loci ☉ declinationem, eamque complemento latitudinis ad quadrantem adde, si fuerit borealis, uel aufer, si australis. Ita enim uenaberis quæ sitam Solis altitudinem meridianam. Ut sit datus locus ☉ octaua pars II plena. Data uero latitudo regionis graduum 54.0. Huius igitur complementum ad quadrantem est partium 36.0'. Et declinatio boreæ loci ☉ partium 21, 40, quæ addita complemento latitudinis, id est, gradibus 36.0', conficit altitudinem ☉ meridianam quæ sitam partium 57.40.

45. **PRÆCEPTUM V. M.** Data altitudine Solis meridiana, & latitudine regionis, inueniendus est locus Solis.

Constat ex primis doctrinæ huius elementis, qualiscunque sit declinatio ☉, semper eam duobus punctis competere in eodem zodiaci semicirculo utrinque ab uno eodemque puncto solstitiali seu trope æquidistantibus. Ideoque ut de loco ☉ ex hoc præcepto possis pronunciare, non solum scire oportet in boreo an notio semicirculo Sol uersetur, uerum etiam utriusque sectioni propior sit. Sicut autem Solis boreæ declinatio crescit per uernum quadrantem, ac decrescit per æstiuum. Sic contra australis eius declinatio augebitur per autumnalem quadrantem, ac contrahitur per hibernum. Hæc prius monere uisum est.

Præcepti autem hæc ratio est. Confer inter se datam ☉ altitudinem meridianam, & complementum latitudinis. Horum enim arcuum differentia est declinatio loci ☉ boreæ quidem, si data altitudo ☉ maior fuerit complemento latitudinis, australis uero, si fuerit minor eodem complemento. Iam ex declinatione ☉ uenaberis locum eius secutus superius præceptum 13. Ut si data fuerit altitudo ☉ meridianæ partium 57.40. Latitudo regionis partium 54.0'. sitque Sol ex hypothese uel obseruatione propior uerno æquinoctio, quam autumnali. Complementum igitur latitudinis est 36. graduum, quod ablatum a data Solis altitudine meridianæ, relinquit declinationem eiusdem boream partium 21. scr. 40. quæ declinatio iuxta 12. præceptum competit uel 8. parti II, uel 22. parti ☉, quia hæc duo puncta pati absunt interuallo a trope æstiuæ.

Verum

Præceptū.

Exemplū.



Verum quia subiicitur Solem esse uiciniorē æquinoctio uerno, pro-  
nunciabis Solem tenere 8. gradum II.

Vsus huius  
præcepti  
ualde illu-  
stris.

Est autem huius præcepti usus in obseruando loco ☉, ex cuius cognitio-  
ne pender notitia horæ æquinoctij uerni uel autumnalis, præsertim si  
locus ☉ non ita multis gradibus distet ab æquinoctio. Nam si hunc ar-  
cum distantiae ☉ distribueris in motum uerum diurnum ☉, habebis dies  
& horas, quibus uel præcessit, uel sequetur tempus obseruationis hora  
illius æquinoctij, cui ☉ uicinus est, id quod breuiter indicasse in præsen-  
tia satis est. Quomodo autem ex obseruatione duorum similium æquino-  
ctiorum constituatur anni adparens magnitudo, petendum est uel ex 3.  
libro μεγάλης συντάξεως Ptolomæi, uel ex tertio libro operis reuolutio-  
num Copernici, atq; ex commentarijs nostris Astronomicis.

46. P R A E C E P T V M. Data altitudine Solis, inuenienda est  
proportio gnomonis & umbræ.

Vsus um-  
brarum a-  
pud uete-  
res.  
Regula de  
umbris.

Veteres ante usum nostrorum horologiorum horas suas interdū no-  
tabant per magnitudines umbrarum Solis, quemadmodum ex Plinio,  
Columella, Palladio, & alijs scriptoribus manifestum est. Itaq; cum alius  
multiplex est usus harum sequentium propositionum, tum uero, quod  
profunt ad intelligenda plurima loca ueterum scriptorum. Sunt autem  
notissimæ regulæ. Cum altitudo Solis minor est 45. gradibus, aut semis-  
se quadrantis circuli, umbra maior est gnomone. Si æqualis est altitudo  
45. gradibus, umbra par est gnomoni. Si deniq; maior, umbra minor est  
gnomone.

Præceptū. Præceptum hoc sic expedies. Cum complemento altitudinis ☉ ingre-  
dere secundum Canonem usitato more. Oblatus enim uel collectus nu-  
merus est quæsitæ umbra earum particularum, quarum gnomon adsu-  
mitur 10000000. Sed si numerum oblatum seu collectum multiplicaue-  
ris per 60. & diuideris emergentem in 10000000. idq; feceris quamdiu  
uisum fuerit, habebis primum partes, postea scrupula prima & secunda,  
Exemplū. ac porro reliqua suo ordine, si libet progredi. Vt si fuerit altitudo ☉ par-  
tium 36. scr. 20'. quæritur ratio gnomonis & umbræ, quæ iactatur a Sole  
ad id momentum temporis. Cum complemento altitudinis ☉, quod est  
partium 53. 40. ingressus canonem lateraliter, excerpe hunc numerum  
13596764. Itaq; quarum particularum gnomon est 10000000. earum  
umbra 13596764. Quod si hunc umbræ numerum multiplicaues per  
60. & emergentē numerū distribueris in numerū gnomonis 10000000.  
particularum, habebis partes 81. reliquis particulis 5805840. quas si rur-  
sum multiplicatas in 60. distribueris in easdem particulas gnomonis, exi-  
stunt



stunt scrupula prima 34. reliquis rursus particulis 8350400. Quibus de-  
nuo in 60. multiplicatis, ac distributis in particulas gnomonis, euadunt  
scrupu. 50. secunda, reliquis particulis 1024000. Itaq; quarum gnomon  
adsumitur 60. partium, earum in hac data Solis altitudine umbra est par-  
tium 81. scr. 34'. 5" 0. ferè.

In fine autem huius operis adiecta est tabula umbrarum ad singulos De tabula  
gradus altitudinis, quam iuxta huius præcepti rationem compositam es- umbrarum  
se sciat studiosus lector. infra adie-  
cta.

47. P R A E C E P T V M. Data proportionē gnomonis & um-  
brae, inuenienda est altitudo Solis.

Primum regulæ proximæ hic conuertendæ sunt, nempe, Si umbra ma- Regula  
ior est gnomone, altitudo ☉ minor est 45. gradibus circulo. Si æqualis est præceden-  
umbra gnomoni, altitudo quoq; Solis æquat se 45. gradibus. Si minor tes conuer-  
deniq; eadem superat gradus 45. Iam si umbra forte datur in particulis, se.

quarum gnomon est 10000000. quære umbræ magnitudinem areali in-  
gressu in fœcundo Canone. Extra enim & gradus & scrupula inuenies illi-  
us arcus, qui complementum existit quæsitæ altitudinis Solis. Ad hunc  
igitur modum patebit altitudo ☉, congruens datæ proportioni gnomo-  
nis & umbræ. Vt si quarum gnomon est 10000000. earundem umbra  
13596764. ingressus in fœcundum Canonem cum umbræ numero, area-  
li lege, excerpo simpliciter partes 53. scr. 4' 0. quarum complementum est  
partium 36. 2' 0. Altitudo igitur ☉ quæsitæ est partium 36. scr. 20'.

Quod, si gnomon datur aliter, quàm in particulis 10000000. initio in hīs 2, Si umbra  
dem umbræ magnitudo exploranda est iuxta uulgatissimam regulam datur ali-  
proportionum. Umbrae enim numerum si multiplices per futurum nu- ter.

merum gnomonis particularum 10000000. atq; emergentem numerum  
partiaris in datum numerum gnomonis, habebis umbræ numerum par-  
ticularum similium, quarum gnomon intelligitur 10000000. Si deniq;  
umbræ atq; gnomonis proportio datur in scrupulis astronomicis, resolu-  
ue omnia in minimam spetiem, accætera perfice similiter, ut modo di-  
ctum est. Horum utrunq; cognosces ex hoc uno exemplo. Sit umbra par-  
tium 81. scr. 34'. 5" 0. quarum gnomon 60. Primum igitur gnomon re-  
solutus facit secunda scrupula 216000. Similiter umbræ partes ac scru-  
pula faciunt summatim scr. 293690. Quorum igitur gnomon 21600. eo-  
rundem umbra 293690. Iam si hæc umbræ scrupula, multiplicata per  
10000000. particulas, diuidas in scr. gnomonis 21630. parabis umbram  
particularum 13596759. quarum gnomon 10000000. Ingressus igitur  
rursus fœcundū canone, ut prius, colligo altitudinem ☉ partium 36. 20'.



48. PRAECEPTVM. Data latitudine regionis & loco Solis, inuenienda est proportio gnomonis & umbræ meridiane.

Vsus huius  
præcepti

Huius præcepti usus est, ut condatur tabula continens umbrarum rationem uel ad singulos gradus latitudinis, uel iuxta parallelorum ac climatum distributionem. Sicut utranq; tabulam umbrarum in fine huius operis adiecimus. Sic autem tractatur hoc præceptum. Primum dati loci ☉ declinationem, inuenias per decimum præceptum, eamq; complemento latitudinis regionis addas, si fuerit borealis ipsa declinatio, auferas autem, si australis. Ita enim conficies altitudinem ☉ meridianam. Quod si Sol careat declinatione, ut in æquinoctiis, ipsum complementum latitudinis, erit mox altitudo ☉ meridianæ. Hinc per 46. præceptum inuenies proportionem gnomonis & umbræ meridiane. Vt sit latitudo regionis 52. grduum, Sol autem in principio ☽. Maxima igitur ☉ declinatio, ut nostra ætate, partium est 23. scr. 28'. 3" 0. borea. Hanc si adijcis complemento latitudinis, id est, partibus 38. 0'. colligis altitudinem ☉ meridianam partium 61. scr. 28'. 3" 0. Hinc per 46. præceptum quarum gnomon est 10000000. earundem particularum umbra 5435216. uel quorum gnomon 60. earundem umbra partium 32. scr. 36'. 3" 8. Quod si in hac eadem latitudine regionis Sol tenuerit æquinoctialem, quum declinatio in nihilum abeat, ipsum complementum latitudinis est altitudo Solis meridianæ partium 38. 0'. Rursus igitur per 46. præceptum, quarum particularum gnomon est 10000000. earundem umbra 12799416. Vel quarum partium gnomon 60. earundem umbra 76. scr. 47'. 4" 7. Sit tandem in eadē latitudine Sol in principio ☿. Maxima ☉ declinatio rursus partium 23. scr. 28'. 3" 0. sed australis, quæ ablata à complemento latitudinis relinquit partes 14. scr. 31. 30. Similiter ergo quarum gnomon 10000000. earundem umbra 38598302. uel quarum gnomon 60. earundem umbra partium 231. scr. 35'. 5" 6.

49. PRAECEPTVM. Dato loco ☉, dataq; proportionē gnomonis & umbræ meridiane, inuenienda est latitudo regionis.

Vsus huius  
præcepti  
in signis.

Magnus huius præcepti usus est in explicandis plurimis locis ueterum Geographorum, qui ante Ptolomæum situs insignium ciuitatum uersus boream & austrum describere iuxta rationem umbrarum consueuerunt, quemadmodum ex Strabonis opere Geographico prolixè adparet. Numerum igitur gnomonis multiplicatum in totum sinum, id est, particulas 10000000 partire in numerum umbræ. Nascens enim numerus in secundo Canone ostendit altitudinem ☉ meridianam. Huius complementum ad quadrantem est latitudo regionis, siquidem Sol expers fuerit declinationis



clinationis, id quod fit in æquinoctiis. Sin minus, inuentæ altitudini ☉ meridianæ adde declinationem ☉ australem, inuentam per 10. præceptum, uel aufer borealem. Sic enim euadet tandem complementum latitudinis, ac propterea ipsa latitudo regionis. Vt si solstitialis umbra 35. partium, quarum gnomon 60. uel quarum gnomon 52. earum umbra 7. Maxima autem ☉ declinatio, ut nostro tempore, est partium 23. scr. 28'. 3" 0. Iam quarum umbra adsumitur 10000000. earundem & gnomon euadit 17142857. cui numero e fœcundo Canone competunt gradus 59. scr. 44' 3" 6. altitudo scilicet meridianæ ipso die solstitij. Hinc ablata maxima Solis obliquatio, ut borea, partium 23. scr. 28'. 3" 0. relinquit complementum latitudinis regionis partium 36. scr. 16'. 6". Huius complementum ad quadrantem est quæ sita latitudo regionis partium 53. scr. 43'. 54".

Sed si datur umbra æquinoctialis meridianæ, compendiosius fiet nec *Altera pars præcepti.* gocium hoc modo. Numerum umbræ multiplicatum in totum sinum, uel particulas 10000000. distribue in numerum gnomonis. Emergens enim numerus in fœcundo Canone mox prodit altitudinem poli. Exemplum petamus à Plinio, apud quem capite 74. libri secundi hæc extant uerba. Meridiano tempore æquinoctij die in urbe Roma nona pars gnomonis deest umbræ, hoc est. Quarum partium gnomon habet 9. earundem umbra tantum est 8. Quarum igitur gnomon 10000000. particularum, earum umbra 8888889. Ideo ex fœcundo Canone mox deprehenditur latitudo urbis Romæ partium 41. scr. 38'. ferè. Nec procul abest hic calculus à Ptolomæo, cuius Geographia tradit Romæ latitudinem partium 47. 40. Etsi recentes obseruatores adfirmant eam non esse maiorem partibus 41. 10'. De qua re, Deo iuuante, differendum est alibi.

Fortassis hic etiam subiungendum erat hoc præceptum, ne quid omis- *Aliud præceptum.* sum uideretur, quomodo data latitudine regionis, & proportionem gnomonis, umbræq; meridianæ, locus ☉ eruatur. Verum huius præcepti loco usurpetur quadragesimum quintum, quia facilius datur altitudo Solis meridianæ, quàm gnomonis umbræq; proportio. Si quis tamen omnino uolet in hunc ordinem adsciscere hoc, quod dixi, præceptum, is uoti compos fiet, secutus superiora præcepta 47. & 45.

Nunc accedimus ad præcepta de erigendis seu constituendis figuris cœli, in quibus præceptis eum seruabimus ordinem, ut studiosus Logista hanc doctrinæ partem, quæ maxime expetitur, facillime citraq; molestiam animo complectatur, & addiscat, Sic igitur ordiemur.



50. **PRAECEPTVM.** Dato loco Solis, datae horae æquinoctiales numeratae ab ortu uel occasu, reducendae sunt ad horas æquinoctiales quae effluxerunt à meridie.

Quia *καλιναι* siue temporales horae ante aliquot saecula desierunt esse in usu, praeeptum tantum tradimus de horis æquinoctialibus. Sed si forte casus quispiam obtulerit temporales, hae iuxta 33. praeeptum commutentur prius in horas æquinoctiales, quae porro ad hunc tractari modum debent. Inuenias per 33. praeeptum arcum ☉ semidiurnum, quem commutatum in horas æquinoctiales adde horis, quae numerantur ab occasu, uel aufer isdem numeratis ab ortu, adsumpto spatio diei naturalis, uel horis 24. si opus fuerit. Vt sit locus ☉ pars 27. 4' 2".  $\frac{1}{2}$ , ac praeterierint uel ab occasu horae æquinoctiales 15. 54'. uel ab ortu horae 2. 6'. Ideo per 32. praeeptum arcus semidiurnus ☉ est temporum 76. 32'. id est, horarum 5. 6'. quae additae horis 15. 54. conflant horas 21. 0'. quae scilicet à meridie proximo praeterierunt.

Quod si easdem horas 5. 6'. abstuleris horis 2. 6'. adsumptis 24. reliquae fient similiter horae 21. 0'. ut utraq; uia eodem peruenimus.

51. **PRAECEPTVM.** Datae horae æquinoctiales in tempora æquinoctialia commutandae sunt.

Spatium  
diei naturalis.

Supra uni horae æquinoctiali 15. tempora dedimus, quoniam uicies quater quindecim absoluunt partes integri circuli 360. Sed quia spatum diei naturalis complectitur tempora ferè 361. eò quod integro circulo Sol motu proprio quotidie adiicit unam ferè partem, malunt aliqui uni horae æquinoctiali tribuere tempora 15. 2'. 3" 0. & scrupulo unius horae scrupula 1' 5. 2". 3" 0. temporalia. Quorum sententiam non repræhendimus, sed potius geminam tabellam hic adiecimus, ut minori negotio commutatio hæc fiat. Ingrediēris ergo primum cum horis, deinde cum scrupulis horae uel semel, uel iterum, si res poscit, quae omnia in unam collecta summam quæ sita tempora ostendent, id quod subiecta exempla satis docent. Vt sint 21. horae commutandae in tempora æquinoctialia. In Canonio igitur horarum uideo 21. horis adscripta esse tempora 315. 52'. 3" 0. Quod si datæ fuerint horae 21. cum scrupulis 36. tempora & scrupula eorum particulatim colligenda sunt. Vt 21. horis respondent tempora 315. 52'. 3" 0. scrupulis quidem 30. tempora 7. 3' 1. 1" 5. at 6. scrupulis tempus 1. 30'. 1" 5. quae omnia in unam coniecta summam, efficiunt tempora 324. 54'. horis 21. 36'. respondentia

Sequitur



*Sequitur geminata tabella commutandi horas & scrupula  
earum in tempora æquinoctialia.*

| H O R A E. |      |                |                | Scrupula horæ. |      |                |                |                |
|------------|------|----------------|----------------|----------------|------|----------------|----------------|----------------|
|            | tēp. | 1 <sup>a</sup> | 2 <sup>a</sup> |                | tēp. | 1 <sup>a</sup> | 2 <sup>a</sup> | 3 <sup>a</sup> |
| 1          | 15   | 2              | 30             | 1              | 0    | 15             | 2              | 30             |
| 2          | 30   | 5              | 0              | 2              | 0    | 30             | 5              | 0              |
| 3          | 45   | 7              | 30             | 3              | 0    | 45             | 7              | 30             |
| 4          | 60   | 10             | 0              | 4              | 1    | 0              | 10             | 0              |
| 5          | 75   | 12             | 30             | 5              | 1    | 15             | 12             | 30             |
| 6          | 90   | 15             | 0              | 6              | 1    | 30             | 15             | 0              |
| 7          | 105  | 17             | 30             | 7              | 1    | 45             | 17             | 30             |
| 8          | 120  | 20             | 0              | 8              | 2    | 0              | 20             | 0              |
| 9          | 135  | 22             | 30             | 9              | 2    | 15             | 22             | 30             |
| 10         | 150  | 25             | 0              | 10             | 2    | 30             | 25             | 0              |
| 11         | 165  | 27             | 30             | 15             | 3    | 45             | 37             | 30             |
| 12         | 180  | 30             | 0              | 20             | 5    | 0              | 50             | 0              |
| 13         | 195  | 32             | 30             | 30             | 7    | 31             | 15             | 30             |
| 14         | 210  | 35             | 0              | 40             | 10   | 1              | 40             | 0              |
| 15         | 225  | 37             | 30             | 45             | 11   | 16             | 52             | 30             |
| 16         | 240  | 40             | 0              | 50             | 12   | 32             | 5              | 0              |
| 17         | 255  | 42             | 30             | 60             | 15   | 2              | 30             | 0              |
| 18         | 270  | 45             | 0              |                |      |                |                |                |
| 19         | 285  | 47             | 30             |                |      |                |                |                |
| 20         | 300  | 50             | 0              |                |      |                |                |                |
| 21         | 315  | 52             | 30             |                |      |                |                |                |
| 22         | 330  | 55             | 0              |                |      |                |                |                |
| 23         | 345  | 57             | 30             |                |      |                |                |                |
| 24         | 361  | 0              | 0              |                |      |                |                |                |

52. P R A E C E P T V M. Dato loco Soli & horis, quæ à meridie  
effluxerunt, ascensio recta medij celi, item  
obliqua horoscopi ascensio inue  
nienda est.



Inuenias dati loci ☉ ascensionem rectam per 16. præceptum, eiq; adde horas, quæ à meridie effluxerunt, commutatas in tempora æquinoctialia, abiecto integro circulo, si excreuerit. Sic conflabis ascensionem rectam mediæ cœli, cui ascensioni, si quadrantem circuli adiunxeris, existet obliqua ascensio Horoscopi. Si tenim, ut prius datus locus ☉ 27.4'2. & horæ 21.0'. præterierint à meridie. Ascensio igitur recta loci est 205. 4'3. temporum.

Et horæ 21.0'. commutatae in tempora faciunt temp. 315. 53. fere, 161. 36.

1. Ascensio igitur recta mediæ cœli, temporum abiecto uidelicet integro circulo.

Adde uero rursum tempora.

2. Ascensio igitur obliqua horoscopi temporum

53. **PRAECEPTUM.** Dato loco ☉, & data ascensione uel recta mediæ cœli, uel obliqua horoscopi, quot horæ à meridie antecedentis die præterierint explorandum est

**Vsus præcepti.**

Huius præcepti usus erit, si forte in quopiam themate cœlesti horæ uel minus, uel perperam fuerint expressæ. Item in corrigendis thematis natalicijs per moram uel aliter, deniq; alijs etiam modis usum hoc præceptum habere potest, quod sic tractandum est.

Ascensionem rectam dati loci ☉ inuentam rursum per 16. præceptum, aufer ex ascensione recta mediæ cœli, adsumpto integro circulo, si opus fuerit. Si enim relinquentur tempora æquinoctialia, quæ à proximo meridie circulum meridianum transierunt. Hæc porro areali ingressu illata in Canonion præcepti 51. ostendunt horas & scrupula, quæ à meridie proximo effluxerunt. Quod si data sit ascensio obliqua horoscopi & auferatur ab ea quadrans circuli, relinquetur ascensio recta mediæ cœli, cum qua ad propositum peruenies sicut prius. Vt datus locus ☉ sit, ut prius, 27.4'2. & data ascensio recta mediæ cœli temp. 161. 36.

1. Est autem ascensio recta loci ☉ temporum 205. 43. Quæ à data ascensione recta M. C. adsumpto integro circulo relinquit

Præterierunt ergo à meridie hæc reliqua tempora 315. 53. Quæ illata in Canonion præcepti 51. ostendunt extra in margine horas

2. Sit data ascensio obliqua horoscopi temporum 251. 36. Auferatur autem quadrans scilicet tempora 90. 0. Reliqua igitur ascensio recta M. C. 161. 36. Cætera igitur perfice.

Quid



Quid autem, inquires, si nec recta ascensio mediæ cœli datur, nec obliqua horoscopi, sed tantum gradus Eclipticæ uel transiens medium cœli uel ascendens. Hic sciat noster Logista, quod ad uenandam rectam quidem ascensionem mediæ cœli utendum sit superiori præcepto decimo sexto, ad obliquam uero præcepto 26. quod requirit datam regionis latitudinem.

54. P R A E C E P T V M. Dato loco ☉ & horis, quæ à meridie effluxerunt, gradus Eclipticæ, qui medium cœli transit, inueniendus est.

Per 52. præceptum inuenias ascensionem rectam mediæ cœli. Inde per 18. præceptum habebis gradum Eclipticæ, qui transit medium cœli. Ut sit datus locus ☉ 27. pars 4' 2. ♌, & præterierint horæ à meridie 21. 0'. Ideo per 52. præceptum ascensio recta mediæ cœli colligitur temporum 161. 36'. Ideo per 18. præceptum ratiocinamur medium cœli transire 10. 3'. *III*.

55. P R A E C E P T V M. Dato loco Solis, & horis, quæ à meridie effluxerunt, dataq; latitudine regionis, gradum horoscopi inuenire oportet.

Per 52. præceptum ratiocineris ascensionem obliquam horoscopi, inde per 27. præceptum uenaberis gradum ascendentem. Sit enim rursus datus locus ☉. 27. 4' 2. ♌, ac præterierint horæ à meridie 21. 0'. deniq; data latitudo regionis sit partium 51. 0'. Quare per 52. præceptum obliqua ascensio horoscopi colligitur temporum 251. 3' 6. Quare per 27. præceptum gradus ascendens 20. 3' 0. *M*.

56. P R A E C E P T V M. Data ascensione recta mediæ cœli, uel obliqua horoscopi, & datis horis, quæ à meridie antecedentis diei effluxerunt, inueniendus est locus Solis.

Datas horas, quæ à meridie effluxerunt, commutatas in tempora æquinoctialia, aufer ascensionem rectam mediæ cœli, addito toto circulo, si res postulat, & habebis reliquam ascensionem rectam loci ☉. Huic per 18. præceptum inuenies locum ☉. Quod si data fuerit obliqua ascensio Horoscopi, ablato quadrante, habebis ascensionem rectam mediæ cœli, ut constat ex præcedentibus. Cætera igitur expedies, ut iam dictum est.

Ut sit obliqua ascensio horoscopi temporum

251. 3' 6.

Recta mediæ cœli

161. 36.

Horæ



Horæ à meridie præterierint 21.0'. quæ  
faciunt tempora

Ideo recta ascensio loci ☉ temporum

Hinc constat locus ☉, qui quærebatur, pars

315. 53.

205. 43.

27. 42. 5.

57. PRAECEPTVM. Ad datum tempus in data regionis latitudine, constituenda est figura coeli iuxta Firmici  
aut Ptolomæi uiam.

Firmici &  
Ptolomæi  
sententia.

Haftenus generalia tradidi de gradu horoscopi, & medijs coeli, seu culminante, ut Pontanus loquitur. Deinceps autem quatuor formæ seu modi recitandi sunt, quibus ad datum tempus thema seu figura coeli constitui potest. Ac initio discantes, qui Ptolomæum atq; firmicum aliosq; eruditos in hoc genere scripores nondum legerunt, admonendi sunt de eruditis ac uetustis adpellationibus duodecim coeli domiciliorum, de quibus hoc primum tenendum est, quod numerantur ab horoscopo, id est, à linea horizontis orientali per subterraneum semicirculum, nempe in consequentia, uel ut uulgo uocant, secundum seriem signorum. Quatuor autem zodiaci puncta, quæ incidunt in quolibet coeli positu in horizontem & Meridianum, quia sunt principalia, & maximæ potestatis. Vocantur à Græcis κεντρα, latinis Cardines, item anguli, nempe initium primæ domus, quartæ, septimæ, ac decimæ. Quæ uero hos cardines consequuntur domus, Græcis ἐπαναφοραι, uulgo domus succedentes dicuntur. Vt secunda, quinta, octaua, & undecima. Quæ autem eosdem cardines proxime autecedunt, ut duodecima, tertia, sexta, & nona, Græcis sunt ἀποκλίματτα, uulgo domus cadentes. Vocantur etiam pigra deiecta q; loca, quæ cum horoscopo nullam habent familiaritatem, ut secunda, sexta, octaua, & duodecima domus. Hæc omnia in subiecta tabella oculis patent, in qua cuiusq; etiam domicilij significatio una dictione summatim monstrata est.

### TABELLA.

| DVODECIM COELI DOMICILIORVM. |                |           |           |                  |             |
|------------------------------|----------------|-----------|-----------|------------------|-------------|
| ORDO                         | ADPELLATIONES. |           |           | Significationes. |             |
| I.                           | CARDO          | ὠρόσκοπος | ἀνατολή   | ortus            | Lucrū       |
| II.                          | Succedens.     | ἀναφορα   | ἡ inferna | porta            | Piger locus |
| III.                         | Cadens         | θεα       | Dea.      |                  | Fratres     |
| IIII.                        | CARDO          | ὑπόγειον  | Imum      | coelū            | Parentes    |



|       |           |               |               |       |            |
|-------|-----------|---------------|---------------|-------|------------|
| V.    | Succedens | ἀγαθὴ τύχη    | Bona fortuna  |       | Liberi     |
| VI.   | Cadens.   | κακή τύχη     | Mala fortuna  | Piger | Valeudo    |
| VII.  | C A R D O | δύσις         | OCCASVS       |       | Coniunx    |
| VIII. | Succedens | ἐπιπατα' φορε | Superna porta | Piger | Mors       |
| IX.   | Cadens    | θεῶ           | Deus          |       | Religio    |
| X.    | C A R D O | μεσσηραίνημα  | Medium cœli   |       | Regnum     |
| XI.   | Succedens | ἀγαθοδαίμων   | Bonus dæmon   |       | Benefactor |
| XII.  | Cadens    | κακοδαίμων    | Malus dæmon   | Piger | Carcer     |

Vita, lucrum, fratres, genitor, nati, ualetudo.  
 Coniunx, mors, & religio, regnum, benefactor.  
 Sed postrema domus metuenda est carceris ædes.

Deinde sciendum est, quod diuersa imaginatio seu speculatio hominum ingeniosissimorum peperit hos quatuor sequentes modos constituendi thema cœli. Et si enim simul omnes partiuntur quendam semicirculum in senas partes æquales, per easque sectiones, & duo cœli puncta, ex diametro opposita, describunt maximos circulos distinguentes domicilia, magna tamen dissimilitudo est. Semicirculum enim alij sumunt zodiaci, alij æquinoctialis, alij cuiusdam circuli uerticælis, qui super communi sectione horizontis & Meridiani tanquam polo describitur. Et hi semicirculi omnes horizonte aut meridiano auulsi seu intercepti intelliguntur. Sunt denique qui accipiant paralleli per gradum eclipticæ orientem descripti semicirculum meridiano circulo interceptum. Rursus alij maximos circulos, qui distinguunt XII cœli domicilia, seu loca describunt per polos zodiaci, alij per polos æquinoctialis, alij denique per communes sectiones horizontis & meridiani. Quæ omnia singulatim nobis explicanda erunt, & illustranda præceptis atque exemplis. Hæc in quatuor sequentes modos quasi præfari uisum est.

Sit igitur nobis hic primus modus, quem docti uiri nostra ætate, ut antiquissimum maxime amplectuntur. Congruite enim præ reliquis tribus modis plurimum ad Firmici & Ptolomæi descriptores, quia partitur zodiaci semicirculum horizonte auulsum uel superiorem uel inferiorem in senas partes æquales, per easque sectiones & polos zodiaci descripti maximos circulos. Itaque cum XII cœli domicilia simpliciter quæ habent interualla, quod ad Eclipticæ gradus attinet, cum inuento gradu Eclipticæ, qui tenet horoscopus, seu ascendit, reliquorum domiciliorum cuspides

Collatio  
quatuor  
modorum  
erigendi  
figuras.

Primus modus.

p des



des, ut uocant, per se manifesti sunt. Quomodo autem inueniatur hic gradus horoscopi, seu ascendens, etsi ex precedentibus satis patet, tamen discentium causa non grauabor ordine hunc calculum repetere.

Cor coeli.

Locus cor-  
dis coeli.

Primum igitur ad datum tempus inuenies locum ☉ uel ex Ephemeridibus, uel ex tabulis nostris Prutenicis. Deinde per præcedentia præcepta 50. 51. & 52. ratiocinaberis ascensionem tum rectam mediæ coeli, tum obliquam horoscopi. Hinc autem per 54. uel potius 18. præceptum habebis gradum Eclipticæ, qui transit meridianum, itemque per 55. uel potius 27. præceptum habebis gradum Eclipticæ ascendentem. Ex quo reliquorum domiciliorum cuspides sine ullo uogocio ita propagabis, si perpetuo 30. gradus adijcias pro subsequenti domo. Imo uero, si isdem gradibus et scrupulis horoscopi attribuas subinde sequens dodecatemorion pro sequenti domicilio. Cæterum illum Eclipticæ gradum, qui transit meridianum circulum, nunc uocant cor coeli, Cum iuxta hanc domiciliorum hypothesein semper alius sit gradus decimæ domus, alius uero transiens meridianum circulum, nisi cum principium ☿ uel ♀ occupat meridianum in ipso coeli themate, uel cum alterum ex æquinoctialibus punctis tenet horizontem. Existit autem gradus Eclipticæ decimæ domus inter meridianum & horoscopum, cum inciderit in semicirculum zodiaci euehente, scilicet ab initio ♀ in consequentia usque ad initium ☿. Contra uero in altero semicirculo zodiaci deuehente existit inter meridianum circulum & occasum. Exemplum. Sit constituenda figura coeli ad annum Domini 1552. diem 11. Octobris, horamque 9. matutinam, id est, completis annis 1551. diebus 10. Octobris, horis 21.0.

Locus igitur ☉

Ascensio huius recta temporum

Adde pro horis 21.

Ascensio igitur recta M. C.

Adde pro obliqua horoscopi

Obliqua igitur ascensio horoscopi

Per 18. igitur præceptum transit medium coelum

Et per 27. ascendit

Erunt igitur cuspides XII. coeli domiciliorum.

|       |    |    |   |       |    |    |   |
|-------|----|----|---|-------|----|----|---|
| I.    | 20 | 30 | ♈ | VII.  | 20 | 30 | ♏ |
| II.   | 20 | 30 | ♉ | VIII. | 20 | 30 | ♐ |
| III.  | 20 | 30 | ♊ | IX.   | 20 | 30 | ♑ |
| IIII. | 20 | 30 | ♋ | X.    | 20 | 30 | ♒ |
| V.    | 20 | 30 | ♌ | XI.   | 20 | 30 | ♓ |
| VI.   | 20 | 30 | ♍ | XII.  | 20 | 30 | ♉ |

Cor autem coeli 10.3. ♈.

27. 4'2. ♈  
205. 43.  
315. 53.  
161. 36.  
90. 0.  
251. 36.  
10. 3. ♈.  
20' 30. ♈.



**§8. PRAECEPTUM.** Ad datum tempus in data latitudine regionis, constituenda est figura coeli iuxta uiam Abrahae Auenesae uel Regiomontani.

Alter modus erigendi figuras coeli partitur semicirculum æquinoctialis meridiano interceptum in senas partes æquales, uel eiusdem semicirculi quadrantes duos internas partes, eo, quod meridianus & horizon apte intercipiunt quatuor quadrantes æquinoctialis. Describit autem hic modus præter meridianum & horizontem obliquum alios quatuor maximos circulos per has sectiones & communem horizontis ac meridiani intersectionem. His igitur sex circulis coelum distribuitur in duodecim domicilia æquis spatijs æquinoctialis circuli distincta. Ac manifestum est principium decimæ domus iuxta hanc hypothesein, usurpare rectam ascensionem, quia ipso meridiano circulo determinatur, itemque initium primæ domus habere ascensionem obliquam datæ regionis, quia determinatur ipso obliquo horizonte. Reliquorum domiciliorum circuli alias usurpant poli altitudines. Eandem tamen poli altitudinem habent circuli transeuntes per initia undecimæ, ac tertiæ domus, itemque eandem circuli per initia duodecimæ & secundæ transeuntes. Cæterum in omnibus his quatuor modis formandorum thematum coelestium opposita domicilia tenentur ab oppositis gradibus & scrupulis tum æquinoctialis tum zodiaci, proptereaque circuli distinguentes domicilia sunt maximi. Verum de speculatione & hypotheseibus satis. Recito præceptum.

*Secundus  
iuxta uiam  
Regiomontani.*

Ad datum igitur tempus per præcedens præceptum (Cur n. deinceps utamur longis ambagibus) inuenias rectam ascensionem mediæ coeli, cui si quinquies adieceris 30. gradus, procreabis ordine horum domiciliorum obliquas ascensiones, undecimæ, inquam duodecimæ, primæ, secundæ, atque tertiæ. Iam, ut scias quanta sit altitudo poli circulorum inchoantium hæc domicilia, ingredi cum data latitudine regionis canonion, cui titulus est Tabella domorum rationalis, hæc monstrabit altitudinem domiciliorum tum quæ impari numero adpellantur, ut undecimæ ac tertiæ, tum pari numero, ut duodecimæ & secundæ. Gradus igitur Eclipticæ, qui tenent initia horum sex domiciliorum patebunt per 18. & 27. præceptum. Reliquorum autem sex domiciliorum cuspides habent oppositorum domiciliorum dodecatemoria opposita cum iisdem gradibus & scrupulis, quemadmodum hæc omnia subiecto exemplo erunt perspicua.

Sit igitur iuxta hanc uiam rursum constituenda figura coeli completis annis Domini 1551. dieb. 10. Octobris, ac præterea horis 0. in latitudine



regionis 51. gradus . Rursum igitur ascensio recta Medi Coeli tempo  
rum

Et undecimæ domus obliqua

Et duodecimæ obliqua

Et primæ obliqua

Et secundæ obliqua

Tertiæ deniq obliqua

161. 3'6.

191. 36.

221. 36.

251. 36.

281. 36.

311. 36.

$\frac{1}{32} \frac{2}{47}$

Est autem imparium domiciliorum numerus polaris 31. 4'2. & paria  
um grad. 46. 5'6. Sed citra calculi iacturam, omissis scrupulis, sumpseris  
integros gradus illic 32. hic 47. Iam per 18. præceptum ex Canone recta-  
rum ascensionum transit medium cœlum 10. 3.  $\text{m}$ . Ex Canone uero as-  
censionum latitudinis 32. graduum transit cuspidem undecimæ quidem  
domus 9. 57'.  $\text{m}$ , Tertiæ uero domus 25. 4'1.  $\text{b}$ . Ex canone autem ascen-  
sionum latitudinis 47. gr. transit cuspidem duodecimæ domus 0. 4'9.  $\text{m}$ .  
& secundæ 16. 3'.  $\text{p}$ . Deniq ex canone ascensionum 51. gradus transit  
horoscopum 20. 3'0.  $\text{m}$ . Oppositorum autem domiciliorum cuspides te-  
nentur ab oppositorum dodecatemriorum gradibus & scrupulis, ut pa-  
tet ex subiecta tabella.

| Domus | G. | '  | ''         |
|-------|----|----|------------|
| X     | 10 | 3  | $\text{m}$ |
| XI    | 9  | 57 | $\text{m}$ |
| XII   | 9  | 49 | $\text{m}$ |
| I     | 20 | 30 | $\text{m}$ |
| II    | 16 | 3  | $\text{p}$ |
| III   | 25 | 41 | $\text{b}$ |

Et opposi-  
torum do-  
miciliorum.

| Domus | G. | '  | ''          |
|-------|----|----|-------------|
| III   | 10 | 3  | $\text{X}$  |
| V     | 9  | 57 | $\text{V}$  |
| VI    | 0  | 49 | $\text{X}$  |
| VII   | 20 | 30 | $\text{X}$  |
| VIII  | 16 | 3  | $\text{II}$ |
| IX    | 25 | 41 | $\text{b}$  |

**Modus ratio-  
tionalis.** Hunc modum Regiomontanus commendat præ cæteris insigni adpe-  
latione, quia uocat eum Rationalem. Iohannes autem de Saxonia come-  
mentator Alkabitri tribuit eum Abrahæ Auenefre, etsi negat eundem  
modum fuisse tunc in magno usu.

39. **PRAECEPTUM.** Ad datum tempus in data regione,  
constituenda est figura coeli iuxta Cam-  
pani uiam.

Campanus autem hanc concepit idēam duodecim cœli domiciliorum.  
Super communi sectione meridiani & horizontis datæ regionis tanq̃  
polo describit maximum circulum, qui transit nimirum per uerticem ca-  
pitis. Huius semicirculum meridiano inclusum, ac uergentem uersus ora-  
tum



tum distinguit in senas partes æquales, per easq; sectiones, & communem  
horizontis ac meridiani concursum describit quatuor circulos maximos  
qui unâ cum meridiano ac horizonte cœlum partiuntur in XII. interual-  
la seu domicilia æqualia quidem simpliciter, sed non iuxta tempora *Spelulatio.*  
æquinoctialia, nec iuxta partes zodiaci. Quod uero in antecedenti  
modo dictum est de numeris polaribus, id similiter hic quoq; locum ha-  
bet. Nam & decimæ domus initium usurpat rectam ascensionem, sicut  
primæ initium obliquam datæ regionis propter similes causas, ut prius.  
Reliqua deniq; domicilia habent eandem poli altitudinem tum ea, quæ  
pari numero adpellantur, tum quæ impari. Interstitia uero domiciliorū  
etsi inæqualia sunt iuxta tempora æquinoctialia, æqualia tamen existunt  
interualla eorum domiciliorum quæ ab horoscopi linea absistunt æqua-  
liter, ut interstitium duodecimæ & primæ, itemq; undecimæ & secundæ  
deniq; decimæ & tertiæ. Hæc de speculatione.

Præceptum sic se habet. Ad datum tempus inuenienda est, sicut prius, *Præceptū*  
ascensio recta mediæ cœli. Deinde ex canone secundum Campanū & Ga-  
zulium excerpere interstitium tum decimæ, tum undecimæ, itemq; nume-  
ros polares undecimæ & duodecimæ. Quod si congeriem interstitiorum  
decimæ & undecimæ domus reieceris ex quadrante, relinquetur intersti-  
tium duodecimæ uel primæ domus. Iam ascensioni rectæ M. C. primum  
adijce interstitium decimæ, et habes obliquam ascensionem initij undeci-  
mæ. Huic similiter si adiunges interstitium undecimæ, habebis obliquam  
ascensionem initij duodecimæ domus. Huic porrò adiunctum interstiti-  
um duodecimæ domus efficit ascensionem obliquam horoscopi. Quam  
ita quoq; comparabis, si ascensioni rectæ M. C. quadrantem addideris,  
Rursum si obliquæ ascensioni horoscopi adieceris interstitium duodeci-  
mæ, erit in promptu ascensio obliqua secundæ domus, cui tandem adie-  
cto interstitio undecimæ, existet obliqua ascensio tertiæ. Gradus igitur  
Eclipticæ, qui singulorum sex domiciliorum orientalium cuspides, uel  
initia occupant, ratiocinaberis per 18. & 27 præceptum, si singulis ascen-  
sionibus suos numeros polares rite adsciueris, ut in præcedenti modo.

Verum exemplo res tota facilius percipi potest. Sit ergo rursum ad pri-  
us datum tempus ascensio recta M. C. temporum 161. 3' 6". Ex canone ue-  
rò domorum secundum Campanum iuxta latitudinem 51. gradus inter-  
stitium decimæ domus colligitur temporum 19. 58'. Et interstitium un-  
decimæ temporum 27. 30. quorum duorum interstitiorum summa tem-  
porum est 47. 2' 8. quæ reiecta ex quadrante relinquunt tempora 42. 3' 2.  
interstitium uidelicet duodecimæ domus. Simul autem ex eodem Cano-  
ne excerpitur numerus polaris undecimæ & tertiæ graduum 22. 5' 2. id  
est,



est, 23. gr. ferè, duodecimæ uero ac secundæ 42. grad. ferè. Iam si ascensio-  
 ni rectæ M. C. adijcias interstitium decimæ domus, exhibit ascensio obli-  
 qua initij undecimæ domus temporum 181. 3' 4". Huic additum intersti-  
 tium undecimæ efficit obliquam ascensionem initij duodecimæ temporum  
 209. 4'. Cui porro adiunctum interstitium undecimæ, gignit obliquam  
 horoscopi ascensionem temporum 251. 3' 6". quam itidem comparabis, si  
 ascensioni rectæ M. C. adiunxeris quadrantem circuli. Porro ascensioni  
 obliquæ horoscopi adiectum rursus interstitium duodecimæ, procreat as-  
 censionem obliquam initij secundæ, ac huic tandem adiectum interstitium  
 undecimæ domus, exhibet obliquam ascensionem initij tertiæ. Quod si  
 singulis ascensionib. obliquis suos polares numeros rite accommodaue-  
 ris, uenaberis per 18. & 27. præcepta gradus & scrupula zodiaci, qui  
 transeunt cuspides sex domiciliorum cœli orientalium. Vnde etiam pas-  
 bunt cuspides reliquorum sex domiciliorum occidentalium, sicut ostens-  
 dit subiectus calculus.

| Sex domus orien-<br>tales.    | Domus | G. |    |    |
|-------------------------------|-------|----|----|----|
|                               | X     | 10 | 3  | mp |
|                               | XI    | 1  | 27 | ¶  |
|                               | XII   | 22 | 44 | ¶  |
|                               | I     | 20 | 30 | m  |
|                               | II    | 1  | 0  | ¶  |
|                               | III   | 11 | 32 | ¶  |
| Sex igitur occi-<br>dentales. | Domus | G. |    |    |
|                               | III   | 10 | 3  | X  |
|                               | V     | 1  | 27 | V  |
|                               | VI    | 22 | 44 | V  |
|                               | VII   | 20 | 30 | X  |
|                               | VIII  | 1  | 0  | ¶  |
|                               | IX    | 11 | 32 | ¶  |

60. **P R A E C E P T V M.** Ad datum tempus in data regione, constituenda est fi-  
 gura cœli iuxta Alkabicium, uel potius Ioannem de Saxonia.

**Quartus** Hic quartus modus reliquus fuit olim usitatissimus, id quod non solum  
**modus Al-** Regiomontanus testatur, sed ante eum commentator Alkabicij Iohannes  
**cabicij.** de Saxonia anno domini 1331. Ad datum autem tempus primum in da-  
 ta regione cogitari oportet gradum eclipticæ ascendentem. Huius semidi-  
 urnus arcus, uel arcus æquinoctialis circuli ei conterminus, ac similis di-  
 stribuitur in ternas partes æquales. Similiter et arcus seminocturnus eius-  
 dem gradus ascendentis. Per has quatuor sectiones & punctum Eclipticæ  
 oriens seu ascendens describit quinque maximos circulos transeuntes per  
 polos mundi qui una cum meridiano cœlum partiuntur in 12. interualla  
 quæ iuxta hanc hypothesein uocantur domicilia. Initia autem singulo-  
 rum domiciliorum non usurpant alias, quam rectas ascensiones, quia cir-  
 culi omnes per polos mundi describuntur. Iam ex his præcepti ratio fa-  
 cilime intelligi potest. Ad datum n. tempus inuenies tum rectam ascensio-  
 nem



onem M. C. tum gradum Eclipticæ orientem, cuius semidiurnum arcum atq; seminocturnum colliges iuxta 33. præceptum. Est n. arcus seminocturnus complementum sui arcus semidiurni usq; ad semicirculum. Vtriq; uero arcus semidiurni ac seminocturni sume tertiam partem. Ac primum si ascensioni rectæ M. C. ter adieceris trientem arcus semidiurni, conflabis ordine rectas ascensiones initij undecimæ domus, duodecimæ ac primæ. Porro autem si ascensioni rectæ horoscopi adieceris bis arcus seminocturni trientem, comparabis rectas ascensiones reliquorum domiciliorum orientalium secundæ ac terciæ. Hinc igitur per 18. præceptum cognosces gradus Eclipticæ, qui tenent cuspides seu initia sex domorum orientalium, etsi horoscopi gradus prius constet, quare non ignorabuntur etiam cuspides reliquorum sex domiciliorum orientalium.

Repetatur antecedens exemplum, in quo ascensio recta M. C. fuit temp. 161. 3' 6. et gradus horoscopi siue exoriens 20. 3' 0. *m*. Huius est arcus **Exemplū.** semidiurnus quidem temp. 66. 2' 8. at seminocturnus temporū reliquorū ad semicirculum 113. 32'. Triens autem semidiurni arcus est temp. 22. 9'. quæ ter addita rectæ ascensioni M. C. cōficit ordine ascensiones rectas undecimæ, duodecimæ, ac primæ domus. Recta igitur ascensio initij undecimæ quidem temp. est 183. 4' 5. duodecimæ uero temp. 205. 55. & primæ temp. 328. 4'. Triens autem seminocturni arcus temp. est 37. 51. qui semel additus rectæ ascensioni initij primæ gignit rectam ascensionem secundæ temporum 265. 55. cui iterum additus triens gignit ascensionem rectam terciæ temp. 303. 46. Iam per 18. præceptum cognosces gradus Eclipticæ, qui transeunt initia seu cuspides domiciliorum iuxta hanc hypothesin, quemadmodum subiecimus.

| Sex domus orientales. | Domus | G. |             | Sex domus occidentales. | Domus | G. |              |
|-----------------------|-------|----|-------------|-------------------------|-------|----|--------------|
|                       | X.    | 10 | 3 <i>mp</i> |                         | IIII. | 10 | 3 <i>X</i>   |
|                       | XI.   | 9  | 57 <i>¶</i> |                         | V.    | 9  | 57 <i>V</i>  |
|                       | XII.  | 0  | 49 <i>m</i> |                         | VI.   | 0  | 49 <i>δ</i>  |
|                       | I.    | 20 | 30 <i>m</i> |                         | VII.  | 20 | 30 <i>δ</i>  |
|                       | II.   | 26 | 18 <i>†</i> |                         | VIII. | 26 | 18 <i>II</i> |
|                       | III.  | 25 | 31 <i>δ</i> |                         | IX.   | 25 | 31 <i>δ</i>  |

Haftenus igitur maxime insignes utilitates ac communissimas nostri primi libri directionum, itemq; alia ex parte secundi monstrauiamus. Quisquis autem prima elementa huius doctrinæ coelestis ritè uolet cognoscere, nec frustra maximis laborib. uires ingenij sui prosternere, is haud poenitendum, ne quid dicam gloriosius, faciet operæ prætium, si hæc nostra præcepta quotidiano ususibi reddat familiaria.

Finis Præceptorum.







# SEQVITVR CA=

NON DECLINATIONVM GENE=

ralis, seu declinationum Aequinoctialis

ab Ecliptica.

A



CANON DECLINATIONVM AEQVI=

| V    |                           |    |    | Dra |    | Numerus   |  | Dra   |  |      |
|------|---------------------------|----|----|-----|----|-----------|--|-------|--|------|
| Gr.  | Arcus cum<br>differentia. |    |    | Ad. |    | multipli. |  | Sub.  |  | Gr.  |
| scr. | par                       | /  | // | /   | // |           |  |       |  | scr. |
| 0    | 0                         | 0  | 0  | 0   | 0  | 9172920   |  | 28025 |  | 30   |
| 10   | 0                         | 4  | 20 | 0   | 5  | 9172928   |  | 28025 |  | 50   |
|      |                           | 4  | 21 | 0   | 5  | 22        |  | 1     |  |      |
| 20   | 0                         | 8  | 41 | 0   | 10 | 9172950   |  | 28024 |  | 40   |
|      |                           | 4  | 20 | 0   | 5  | 37        |  | 1     |  |      |
| 30   | 0                         | 13 | 1  | 0   | 15 | 9172987   |  | 28023 |  | 30   |
|      |                           | 4  | 21 |     | 4  | 51        |  | 2     |  |      |
| 40   | 0                         | 17 | 22 | 0   | 19 | 9173038   |  | 28021 |  | 20   |
|      |                           | 4  | 20 |     | 5  | 65        |  | 3     |  |      |
| 50   | 0                         | 21 | 42 | 0   | 24 | 9173103   |  | 28018 |  | 10   |
|      |                           | 4  | 20 |     | 5  | 80        |  | 3     |  |      |
| 1    | 0                         | 26 | 2  | 0   | 29 | 9273183   |  | 28015 |  | 29   |
|      |                           | 4  | 21 |     | 5  | 95        |  | 4     |  |      |
| 10   | 0                         | 30 | 23 | 0   | 34 | 9173278   |  | 28011 |  | 50   |
|      |                           | 4  | 20 |     | 5  | 110       |  | 4     |  |      |
| 20   | 0                         | 34 | 43 | 0   | 39 | 9173388   |  | 28007 |  | 40   |
|      |                           | 4  | 20 |     | 5  | 124       |  | 4     |  |      |
| 30   | 0                         | 39 | 3  | 0   | 44 | 9173512   |  | 28003 |  | 30   |
|      |                           | 4  | 21 |     | 5  | 139       |  | 5     |  |      |
| 40   | 0                         | 43 | 24 | 0   | 49 | 9173651   |  | 27998 |  | 20   |
|      |                           | 4  | 20 |     | 5  | 154       |  | 5     |  |      |
| 50   | 0                         | 47 | 44 | 0   | 54 | 9173805   |  | 27993 |  | 10   |
|      |                           | 4  | 20 |     | 5  | 168       |  | 6     |  |      |
| 2    | 0                         | 52 | 4  | 0   | 59 | 9173973   |  | 27987 |  | 28   |
|      |                           | 4  | 21 |     | 5  | 183       |  | 6     |  |      |
| 10   | 0                         | 56 | 25 | 1   | 4  | 9174156   |  | 27981 |  | 50   |
|      |                           | 4  | 20 |     | 5  | 197       |  | 7     |  |      |
| 20   | 1                         | 0  | 45 | 1   | 9  | 9174353   |  | 27974 |  | 40   |
|      |                           | 4  | 21 |     | 5  | 212       |  | 8     |  |      |
| 30   | 1                         | 5  | 6  | 1   | 14 | 9174565   |  | 27696 |  | 30   |
|      |                           | 4  | 20 |     | 5  | 227       |  | 8     |  |      |
| 40   | 1                         | 9  | 26 | 1   | 19 | 9174792   |  | 27958 |  | 20   |
|      |                           | 4  | 20 |     | 5  | 241       |  | 9     |  |      |
| 50   | 1                         | 13 | 46 | 1   | 24 | 9175033   |  | 27949 |  | 10   |
|      |                           | 4  | 20 |     | 5  | 255       |  | 9     |  |      |
| 3    | 1                         | 18 | 6  | 1   | 29 | 9175288   |  | 27940 |  | 27   |
|      |                           | 4  | 20 |     | 5  | 270       |  | 10    |  |      |



| V    |                          |         |          | ♌          |         |                      |             |
|------|--------------------------|---------|----------|------------|---------|----------------------|-------------|
| Gr.  | Arcus cum<br>differentia |         |          | Dra<br>Ad. |         | Numerus<br>multipli. | Dra<br>Sub. |
| scr. | par                      | /       | //       | /          | //      |                      |             |
| 3    | 1                        | 18      | 6        | 1          | 29      | 9175288              | 27940       |
| 10   | 1                        | 22<br>4 | 26<br>20 | 1          | 34<br>5 | 9175558<br>284       | 27930<br>10 |
| 20   | 1                        | 26<br>4 | 46<br>19 | 1          | 39<br>5 | 9175842<br>299       | 27920<br>11 |
| 30   | 1                        | 31<br>4 | 5<br>20  | 1          | 44<br>5 | 9176141<br>314       | 27909<br>11 |
| 40   | 1                        | 35<br>4 | 25<br>20 | 1          | 49<br>5 | 9176455<br>328       | 27898<br>11 |
| 50   | 1                        | 39<br>4 | 45<br>20 | 1          | 54<br>5 | 9176783<br>342       | 27887<br>12 |
| 4    | 1                        | 44<br>4 | 5<br>19  | 1          | 59<br>5 | 9177125<br>357       | 27875<br>12 |
| 10   | 1                        | 48<br>4 | 24<br>19 | 2          | 4<br>5  | 9177482<br>371       | 27863<br>13 |
| 20   | 1                        | 52<br>4 | 43<br>20 | 2          | 9<br>5  | 9177853<br>386       | 27850<br>14 |
| 30   | 1                        | 57<br>4 | 3<br>19  | 2          | 14<br>5 | 9178239<br>401       | 27836<br>14 |
| 40   | 2                        | 1<br>4  | 22<br>19 | 2          | 19<br>5 | 9178640<br>415       | 27822<br>15 |
| 50   | 2                        | 5<br>4  | 41<br>20 | 2          | 24<br>5 | 9179055<br>429       | 27807<br>15 |
| 5    | 2                        | 10<br>4 | 1<br>19  | 2          | 29<br>5 | 9179484<br>443       | 27792<br>16 |
| 10   | 2                        | 14<br>4 | 20<br>19 | 2          | 34<br>5 | 9179927<br>458       | 27776<br>16 |
| 20   | 2                        | 18<br>4 | 39<br>19 | 2          | 39<br>5 | 9180385<br>472       | 27760<br>17 |
| 30   | 2                        | 22<br>4 | 58<br>19 | 2          | 44<br>5 | 9180857<br>486       | 27743<br>17 |
| 40   | 2                        | 27<br>4 | 17<br>18 | 2          | 49<br>5 | 9181343<br>500       | 27726<br>18 |
| 50   | 2                        | 31<br>4 | 35<br>18 | 2          | 54<br>5 | 9181843<br>515       | 27708<br>18 |
| 6    | 2                        | 35<br>4 | 53<br>18 | 2          | 59<br>5 | 9182358<br>529       | 27690<br>19 |
| X    |                          |         |          | ♍          |         |                      |             |



CANON DECLINATIONVM EQVIV

| V                |   |    |    | =           |    |                      |       |              |  |
|------------------|---|----|----|-------------|----|----------------------|-------|--------------|--|
| Arcus cū<br>d̄ra |   |    |    | D̄ra<br>Ad. |    | Numerus<br>multipli. |       | D̄ra<br>Sub. |  |
| par. / //        |   |    |    | / //        |    |                      |       |              |  |
| 6                | 2 | 35 | 53 | 2           | 59 | 9182358              | 27690 | 24           |  |
| 10               | 2 | 40 | 11 | 3           | 4  | 9182887              | 27671 | 50           |  |
|                  |   | 4  | 19 |             | 5  | 543                  | 20    |              |  |
| 20               | 2 | 44 | 30 | 3           | 9  | 9183430              | 27651 | 40           |  |
|                  |   | 4  | 18 |             | 5  | 558                  | 19    |              |  |
| 30               | 2 | 48 | 48 | 3           | 14 | 9183988              | 27632 | 30           |  |
|                  |   | 4  | 18 |             | 5  | 572                  | 20    |              |  |
| 40               | 2 | 53 | 6  | 3           | 19 | 9184560              | 27612 | 20           |  |
|                  |   | 4  | 18 |             | 5  | 587                  | 21    |              |  |
| 50               | 2 | 57 | 24 | 3           | 24 | 9185147              | 27591 | 10           |  |
|                  |   | 4  | 18 |             | 5  | 601                  | 21    |              |  |
| 7                | 3 | 1  | 42 | 3           | 29 | 9185748              | 27570 | 23           |  |
|                  |   | 4  | 18 |             | 5  | 615                  | 22    |              |  |
| 10               | 3 | 6  | 0  | 3           | 34 | 9186363              | 27548 | 50           |  |
|                  |   | 4  | 17 |             | 5  | 629                  | 22    |              |  |
| 20               | 3 | 10 | 17 | 3           | 38 | 9186992              | 27526 | 40           |  |
|                  |   | 4  | 17 |             | 5  | 643                  | 23    |              |  |
| 30               | 3 | 14 | 34 | 3           | 43 | 9187635              | 27503 | 30           |  |
|                  |   | 4  | 18 |             | 5  | 657                  | 23    |              |  |
| 40               | 3 | 18 | 52 | 3           | 48 | 9188292              | 27480 | 20           |  |
|                  |   | 4  | 17 |             | 5  | 670                  | 24    |              |  |
| 50               | 3 | 23 | 9  | 3           | 53 | 9188962              | 27456 | 10           |  |
|                  |   | 4  | 18 |             | 5  | 684                  | 24    |              |  |
| 8                | 3 | 27 | 27 | 3           | 58 | 9189646              | 27432 | 22           |  |
|                  |   | 4  | 16 |             | 5  | 698                  | 25    |              |  |
| 10               | 3 | 31 | 43 | 4           | 3  | 9190344              | 37407 | 50           |  |
|                  |   | 4  | 17 |             | 5  | 712                  | 25    |              |  |
| 20               | 3 | 36 | 0  | 4           | 8  | 9191056              | 27382 | 40           |  |
|                  |   | 4  | 16 |             | 5  | 727                  | 26    |              |  |
| 30               | 3 | 40 | 16 | 4           | 13 | 9191783              | 27356 | 30           |  |
|                  |   | 4  | 17 |             | 5  | 741                  | 26    |              |  |
| 40               | 3 | 44 | 33 | 4           | 18 | 9192524              | 27330 | 20           |  |
|                  |   | 4  | 17 |             | 5  | 755                  | 27    |              |  |
| 50               | 3 | 48 | 50 | 4           | 23 | 9193279              | 27303 | 10           |  |
|                  |   | 4  | 16 |             | 5  | 769                  | 27    |              |  |
| 9                | 3 | 53 | 6  | 4           | 28 | 9194048              | 27276 | 21           |  |
|                  |   |    |    |             | 5  | 783                  |       |              |  |



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Σ

|    | Arcus cum<br>differentia |         |          | Dra<br>Ad. |         | Numerus<br>multipli. | Dra<br>Sub. |  |    |
|----|--------------------------|---------|----------|------------|---------|----------------------|-------------|--|----|
|    | par                      | /       | //       | /          | //      |                      |             |  |    |
| 9  | 3                        | 53      | 6        | 4          | 28      | 9194048              | 27276       |  | 21 |
| 10 | 3                        | 57<br>4 | 22<br>16 | 4          | 33<br>4 | 9194831<br>796       | 27248<br>28 |  | 50 |
| 20 | 4                        | 1<br>4  | 38<br>16 | 4          | 37<br>5 | 9195627<br>810       | 27220<br>29 |  | 40 |
| 30 | 4                        | 5<br>4  | 54<br>15 | 4          | 42<br>5 | 9196437<br>823       | 27191<br>29 |  | 30 |
| 40 | 4                        | 10<br>4 | 9<br>16  | 4          | 47<br>5 | 9197260<br>836       | 27162<br>30 |  | 20 |
| 50 | 4                        | 14<br>4 | 25<br>15 | 4          | 52<br>5 | 9198096<br>850       | 27132<br>30 |  | 10 |
| 10 | 4                        | 18<br>4 | 40<br>15 | 4          | 57<br>5 | 9198946<br>864       | 27102<br>31 |  | 20 |
| 10 | 4                        | 22<br>4 | 55<br>15 | 5          | 2<br>4  | 9199810<br>878       | 27071<br>31 |  | 50 |
| 20 | 4                        | 27<br>4 | 10<br>14 | 5          | 6<br>5  | 9200688<br>892       | 27040<br>32 |  | 40 |
| 30 | 4                        | 31<br>4 | 24<br>14 | 5          | 11<br>5 | 9201580<br>905       | 27008<br>32 |  | 30 |
| 40 | 4                        | 35<br>4 | 38<br>15 | 5          | 16<br>5 | 9202485<br>919       | 26976<br>32 |  | 20 |
| 50 | 4                        | 39<br>4 | 53<br>14 | 5          | 21<br>5 | 9203404<br>932       | 26944<br>33 |  | 10 |
| 11 | 4                        | 44<br>4 | 7<br>14  | 5          | 26<br>4 | 9204336<br>946       | 26911<br>33 |  | 19 |
| 10 | 4                        | 48<br>4 | 21<br>13 | 5          | 30<br>5 | 9205282<br>959       | 26878<br>34 |  | 50 |
| 20 | 4                        | 52<br>4 | 34<br>14 | 5          | 35<br>5 | 9206241<br>972       | 26844<br>34 |  | 40 |
| 30 | 4                        | 56<br>4 | 48<br>13 | 5          | 40<br>4 | 9207213<br>985       | 26810<br>35 |  | 30 |
| 40 | 5                        | 1<br>4  | 1<br>13  | 5          | 44<br>5 | 9208198<br>998       | 26775<br>35 |  | 20 |
| 50 | 5                        | 5<br>4  | 14<br>13 | 5          | 49<br>5 | 9209196<br>1012      | 26740<br>36 |  | 10 |
| 12 | 5                        | 9       | 27       | 5          | 54<br>5 | 9210208              | 26704<br>36 |  | 18 |
|    | X                        |         |          | ny         |         |                      |             |  |    |



CANON DECLINATIONIS ÆQV I

| V                        |     |    |    |   | II         |         | Numerus<br>multipli. | Dra<br>Sub. |  |
|--------------------------|-----|----|----|---|------------|---------|----------------------|-------------|--|
| Arcus cum<br>differentia |     |    |    |   | Dra<br>Ad. |         |                      |             |  |
|                          | par | /  | // | / | //         |         |                      |             |  |
| 12                       | 5   | 9  | 27 | 5 | 54         | 9210208 | 26704                | 18          |  |
| 10                       | 5   | 13 | 39 | 5 | 59         | 9211232 | 26668                | 50          |  |
|                          |     | 4  | 12 |   | 5          | 1038    | 37                   |             |  |
| 20                       | 5   | 17 | 51 | 6 | 4          | 9212270 | 26631                | 40          |  |
|                          |     | 4  | 12 |   | 4          | 1051    | 37                   |             |  |
| 30                       | 5   | 22 | 3  | 6 | 8          | 9213321 | 26594                | 30          |  |
|                          |     | 4  | 12 |   | 5          | 1065    | 38                   |             |  |
| 40                       | 5   | 26 | 15 | 6 | 13         | 9214386 | 26556                | 20          |  |
|                          |     | 4  | 12 |   | 5          | 1078    | 38                   |             |  |
| 50                       | 5   | 30 | 27 | 6 | 18         | 9215464 | 26518                | 10          |  |
|                          |     | 4  | 12 |   | 5          | 1091    | 39                   |             |  |
| 13                       | 5   | 34 | 39 | 6 | 23         | 9216555 | 26479                | 17          |  |
|                          |     | 4  | 11 |   | 4          | 1103    | 39                   |             |  |
| 10                       | 5   | 38 | 50 | 6 | 27         | 9217658 | 26440                | 50          |  |
|                          |     | 4  | 11 |   | 5          | 1117    | 40                   |             |  |
| 20                       | 5   | 43 | 1  | 6 | 32         | 9218775 | 26400                | 40          |  |
|                          |     | 4  | 11 |   | 5          | 1130    | 40                   |             |  |
| 30                       | 5   | 47 | 12 | 6 | 37         | 9219905 | 26360                | 30          |  |
|                          |     | 4  | 11 |   | 5          | 1142    | 41                   |             |  |
| 40                       | 5   | 51 | 23 | 6 | 42         | 9221047 | 26319                | 20          |  |
|                          |     | 4  | 10 |   | 4          | 1155    | 41                   |             |  |
| 50                       | 5   | 55 | 33 | 6 | 46         | 9222202 | 26278                | 10          |  |
|                          |     | 4  | 10 |   | 5          | 1167    | 41                   |             |  |
| 14                       | 5   | 59 | 43 | 6 | 51         | 9223369 | 26237                | 16          |  |
|                          |     | 4  | 10 |   | 4          | 1180    | 42                   |             |  |
| 10                       | 6   | 3  | 53 | 6 | 55         | 9224549 | 26195                | 50          |  |
|                          |     | 4  | 9  |   | 5          | 1193    | 42                   |             |  |
| 20                       | 6   | 8  | 2  | 7 | 0          | 9225742 | 26153                | 40          |  |
|                          |     | 4  | 10 |   | 5          | 1206    | 43                   |             |  |
| 30                       | 6   | 12 | 12 | 7 | 5          | 9226948 | 26110                | 30          |  |
|                          |     | 4  | 9  |   | 5          | 1218    | 43                   |             |  |
| 40                       | 6   | 16 | 21 | 7 | 10         | 9228166 | 26067                | 20          |  |
|                          |     | 4  | 9  |   | 4          | 1231    | 43                   |             |  |
| 50                       | 6   | 20 | 30 | 7 | 14         | 9229397 | 26024                | 10          |  |
|                          |     | 4  | 9  |   | 5          | 1243    | 44                   |             |  |
| 15                       | 6   | 24 | 39 | 7 | 19         | 9230640 | 25980                | 15          |  |
|                          |     |    |    |   | 4          | 1255    | 44                   |             |  |
| X                        |     |    |    |   | III        |         |                      |             |  |



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# CANON DECLINATIONIS ÆQVI

| V                        |   | ♌          |    |                      |    |             |       |    |  |
|--------------------------|---|------------|----|----------------------|----|-------------|-------|----|--|
| Arcus cum<br>differentia |   | Dra<br>Ad. |    | Numerus<br>multipli. |    | Dra<br>Sub. |       |    |  |
| par                      | / | //         | /  | //                   |    |             |       |    |  |
| 18                       | 7 | 38         | 26 | 8                    | 41 | 9255091     | 25120 | 12 |  |
| 10                       | 7 | 42         | 29 | 8                    | 45 | 9256561     | 25068 | 50 |  |
|                          |   | 4          | 2  |                      | 5  | 1482        | 52    |    |  |
| 20                       | 7 | 46         | 31 | 8                    | 50 | 9258043     | 25016 | 40 |  |
|                          |   | 4          | 3  |                      | 4  | 1493        | 52    |    |  |
| 30                       | 7 | 50         | 34 | 8                    | 54 | 9259536     | 24964 | 30 |  |
|                          |   | 4          | 2  |                      | 5  | 1505        | 53    |    |  |
| 40                       | 7 | 54         | 36 | 8                    | 59 | 9261041     | 24911 | 20 |  |
|                          |   | 4          | 3  |                      | 4  | 1516        | 53    |    |  |
| 50                       | 7 | 58         | 39 | 9                    | 3  | 9262557     | 24858 | 10 |  |
|                          |   | 4          | 2  |                      | 5  | 1528        | 54    |    |  |
| 19                       | 8 | 2          | 41 | 9                    | 8  | 9264085     | 24804 | 11 |  |
|                          |   | 4          | 1  |                      | 4  | 1539        | 54    |    |  |
| 10                       | 8 | 6          | 42 | 9                    | 12 | 9265624     | 24750 | 50 |  |
|                          |   | 4          | 1  |                      | 5  | 1550        | 54    |    |  |
| 20                       | 8 | 10         | 43 | 9                    | 17 | 9267174     | 24696 | 40 |  |
|                          |   | 4          | 0  |                      | 4  | 1560        | 55    |    |  |
| 30                       | 8 | 14         | 43 | 9                    | 21 | 9268734     | 24641 | 30 |  |
|                          |   | 4          | 1  |                      | 4  | 1571        | 55    |    |  |
| 40                       | 8 | 18         | 44 | 9                    | 25 | 9270305     | 24586 | 20 |  |
|                          |   | 4          | 0  |                      | 5  | 1582        | 56    |    |  |
| 50                       | 8 | 22         | 44 | 9                    | 30 | 9271887     | 24530 | 10 |  |
|                          |   | 4          | 0  |                      | 4  | 1593        | 56    |    |  |
| 20                       | 8 | 26         | 44 | 9                    | 34 | 9273480     | 24474 | 10 |  |
|                          |   | 3          | 59 |                      | 5  | 1603        | 56    |    |  |
| 10                       | 8 | 30         | 43 | 9                    | 39 | 9275083     | 24418 | 50 |  |
|                          |   | 3          | 59 |                      | 4  | 1614        | 57    |    |  |
| 20                       | 8 | 34         | 42 | 9                    | 43 | 9276697     | 24361 | 40 |  |
|                          |   | 3          | 58 |                      | 4  | 1626        | 57    |    |  |
| 30                       | 8 | 38         | 40 | 9                    | 47 | 9278323     | 24304 | 30 |  |
|                          |   | 3          | 58 |                      | 5  | 1636        | 58    |    |  |
| 40                       | 8 | 42         | 38 | 9                    | 52 | 9279959     | 24246 | 20 |  |
|                          |   | 3          | 58 |                      | 4  | 1647        | 58    |    |  |
| 50                       | 8 | 46         | 36 | 9                    | 56 | 9281606     | 24188 | 10 |  |
|                          |   | 3          | 58 |                      | 4  | 1658        | 58    |    |  |
| 21                       | 8 | 50         | 34 | 10                   | 0  | 9283264     | 24130 | 9  |  |
|                          |   | 3          | 57 |                      | 5  | 1668        | 59    |    |  |
| X                        |   | III        |    |                      |    |             |       |    |  |



# NOCTIALIS AB ECLIPTICA.

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| Gr.  |      | Arcus cū dŕa |    |    |    | Dŕa Ad. |    | Numerus multipli. | Dŕa Sub. |  | Gr.  |
|------|------|--------------|----|----|----|---------|----|-------------------|----------|--|------|
| scr. | par. | /            | // | /  | // | /       | // |                   |          |  | scr. |
| 21   | 8    | 50           | 34 | 10 | 0  |         |    | 9283264           | 24130    |  | 9    |
| 10   | 8    | 54           | 31 | 10 | 5  |         |    | 9284932           | 24071    |  | 50   |
|      |      | 3            | 57 |    | 4  |         |    | 1678              | 59       |  |      |
| 20   | 8    | 58           | 28 | 10 | 9  |         |    | 9286610           | 24012    |  | 40   |
|      |      | 5            | 56 |    | 4  |         |    | 1688              | 59       |  |      |
| 30   | 9    | 2            | 24 | 10 | 13 |         |    | 9288298           | 23953    |  | 30   |
|      |      | 3            | 57 |    | 5  |         |    | 1699              | 60       |  |      |
| 40   | 9    | 6            | 21 | 10 | 18 |         |    | 9289997           | 23893    |  | 20   |
|      |      | 3            | 56 |    | 4  |         |    | 1709              | 60       |  |      |
| 50   | 9    | 10           | 17 | 10 | 22 |         |    | 9291706           | 23833    |  | 10   |
|      |      | 3            | 56 |    | 4  |         |    | 1719              | 60       |  |      |
| 22   | 9    | 14           | 13 | 10 | 26 |         |    | 9293425           | 23773    |  | 8    |
|      |      | 3            | 55 |    | 5  |         |    | 1729              | 61       |  |      |
| 10   | 9    | 18           | 8  | 10 | 31 |         |    | 9295154           | 23712    |  | 50   |
|      |      | 3            | 54 |    | 4  |         |    | 1739              | 61       |  |      |
| 20   | 9    | 22           | 2  | 10 | 35 |         |    | 9296893           | 23651    |  | 40   |
|      |      | 3            | 54 |    | 4  |         |    | 1749              | 61       |  |      |
| 30   | 9    | 25           | 56 | 10 | 39 |         |    | 9298642           | 23590    |  | 30   |
|      |      | 3            | 54 |    | 5  |         |    | 1759              | 62       |  |      |
| 40   | 9    | 29           | 50 | 10 | 44 |         |    | 9300401           | 23528    |  | 20   |
|      |      | 3            | 54 |    | 4  |         |    | 1768              | 62       |  |      |
| 50   | 9    | 33           | 44 | 10 | 48 |         |    | 9302169           | 23466    |  | 10   |
|      |      | 3            | 54 |    | 4  |         |    | 1778              | 62       |  |      |
| 23   | 9    | 37           | 38 | 10 | 52 |         |    | 9303947           | 23404    |  | 7    |
|      |      | 3            | 53 |    | 4  |         |    | 1788              | 63       |  |      |
| 10   | 9    | 41           | 31 | 10 | 56 |         |    | 9305735           | 23341    |  | 50   |
|      |      | 3            | 52 |    | 4  |         |    | 1798              | 63       |  |      |
| 20   | 9    | 45           | 23 | 11 | 0  |         |    | 9307533           | 23278    |  | 40   |
|      |      | 3            | 52 |    | 5  |         |    | 1807              | 63       |  |      |
| 30   | 9    | 49           | 15 | 11 | 5  |         |    | 9309340           | 23215    |  | 30   |
|      |      | 3            | 52 |    | 4  |         |    | 1817              | 64       |  |      |
| 40   | 9    | 53           | 7  | 11 | 9  |         |    | 9311157           | 23151    |  | 20   |
|      |      | 3            | 51 |    | 4  |         |    | 1826              | 64       |  |      |
| 50   | 9    | 56           | 58 | 11 | 13 |         |    | 9312983           | 23087    |  | 10   |
|      |      | 3            | 51 |    | 4  |         |    | 1836              | 64       |  |      |
| 24   | 10   | C            | 49 | 11 | 17 |         |    | 9314819           | 23023    |  | 6    |
|      |      | 3            | 50 |    | 4  |         |    | 1845              | 65       |  |      |

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CANON DECLINATIONIS AEQVI

| V    |                          |    |    | II         |    |                      |             |      |  |
|------|--------------------------|----|----|------------|----|----------------------|-------------|------|--|
| Gr.  | Arcus cum<br>differentia |    |    | Dra<br>Ad. |    | Numerus<br>multipli. | Dra<br>Sub. | Gr.  |  |
| scr. | par                      | I  | II | I          | II |                      |             | scr. |  |
| 24   | 10                       | 0  | 49 | 11         | 17 | 9314819              | 23023       | 6    |  |
| 10   | 10                       | 4  | 39 | 11         | 21 | 9316664              | 22958       | 50   |  |
|      |                          | 3  | 50 |            | 5  | 184                  | 65          |      |  |
| 20   | 10                       | 8  | 29 | 11         | 26 | 9318518              | 22893       | 40   |  |
|      |                          | 3  | 50 |            | 4  | 1863                 | 65          |      |  |
| 30   | 10                       | 12 | 19 | 11         | 30 | 9320381              | 22828       | 30   |  |
|      |                          | 3  | 49 |            | 4  | 1872                 | 65          |      |  |
| 40   | 10                       | 16 | 8  | 11         | 34 | 9322253              | 22763       | 20   |  |
|      |                          | 3  | 50 |            | 4  | 1881                 | 66          |      |  |
| 50   | 10                       | 19 | 58 | 11         | 38 | 9324134              | 22697       | 10   |  |
|      |                          | 3  | 49 |            | 4  | 1889                 | 66          |      |  |
| 25   | 10                       | 23 | 47 | 11         | 42 | 9326023              | 22631       | 5    |  |
|      |                          | 3  | 48 |            | 4  | 1898                 | 66          |      |  |
| 10   | 10                       | 27 | 35 | 11         | 46 | 9327921              | 22565       | 50   |  |
|      |                          | 3  | 48 |            | 4  | 1907                 | 67          |      |  |
| 20   | 10                       | 31 | 23 | 11         | 50 | 9329828              | 22498       | 40   |  |
|      |                          | 3  | 47 |            | 4  | 1916                 | 67          |      |  |
| 30   | 10                       | 35 | 10 | 11         | 54 | 9331744              | 22432       | 30   |  |
|      |                          | 3  | 47 |            | 4  | 1925                 | 67          |      |  |
| 40   | 10                       | 38 | 57 | 11         | 58 | 9333669              | 22364       | 20   |  |
|      |                          | 3  | 46 |            | 4  | 1934                 | 67          |      |  |
| 50   | 10                       | 42 | 43 | 12         | 2  | 9335603              | 22297       | 10   |  |
|      |                          | 3  | 46 |            | 4  | 1942                 | 68          |      |  |
| 26   | 10                       | 46 | 29 | 12         | 6  | 9337545              | 22229       | 4    |  |
|      |                          | 3  | 45 |            | 4  | 1951                 | 68          |      |  |
| 10   | 10                       | 50 | 14 | 12         | 10 | 9339496              | 22161       | 50   |  |
|      |                          | 3  | 45 |            | 4  | 1959                 | 68          |      |  |
| 20   | 10                       | 53 | 59 | 12         | 14 | 9341455              | 22093       | 40   |  |
|      |                          | 3  | 45 |            | 4  | 1967                 | 69          |      |  |
| 30   | 10                       | 57 | 44 | 12         | 18 | 9343422              | 22024       | 30   |  |
|      |                          | 3  | 45 |            | 4  | 1976                 | 69          |      |  |
| 40   | 11                       | 1  | 29 | 12         | 22 | 9345398              | 21955       | 20   |  |
|      |                          | 3  | 44 |            | 4  | 1984                 | 69          |      |  |
| 50   | 11                       | 5  | 13 | 12         | 26 | 9347382              | 21886       | 10   |  |
|      |                          | 3  | 45 |            | 4  | 1992                 | 69          |      |  |
| 27   | 11                       | 8  | 58 | 12         | 30 | 9349374              | 21817       | 3    |  |
|      |                          | 3  | 44 |            | 4  | 2000                 | 70          |      |  |
| X    |                          |    |    | III        |    |                      |             |      |  |



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| Gr.  | Arcus cum<br>differentia. |    |    |    | Dra<br>Ad. |         | Numerus<br>multipli. | Dra<br>Sub. | Gr.  |
|------|---------------------------|----|----|----|------------|---------|----------------------|-------------|------|
| scr. | par                       | /  | // | /  | //         |         |                      |             | scr. |
| 27   | 11                        | 8  | 58 | 11 | 30         | 9349374 | 21817                | 3           |      |
| 10   | 11                        | 12 | 42 | 12 | 34         | 9351374 | 21747                | 50          |      |
|      |                           | 3  | 43 |    | 4          | 2008    | 70                   |             |      |
| 20   | 11                        | 16 | 25 | 12 | 38         | 9353382 | 21677                | 40          |      |
|      |                           | 3  | 42 |    | 4          | 2016    | 70                   |             |      |
| 30   | 11                        | 20 | 7  | 12 | 43         | 9355398 | 21607                | 30          |      |
|      |                           | 3  | 41 |    | 3          | 2023    | 70                   |             |      |
| 40   | 11                        | 23 | 48 | 12 | 45         | 9357421 | 21537                | 20          |      |
|      |                           | 3  | 41 |    | 4          | 2031    | 70                   |             |      |
| 50   | 11                        | 27 | 29 | 12 | 49         | 9359452 | 21467                | 10          |      |
|      |                           | 3  | 41 |    | 4          | 2038    | 71                   |             |      |
| 28   | 11                        | 31 | 10 | 12 | 53         | 9361490 | 21396                | 2           |      |
|      |                           | 3  | 40 |    | 4          | 2046    | 71                   |             |      |
| 10   | 11                        | 34 | 50 | 12 | 57         | 9363536 | 21325                | 50          |      |
|      |                           | 3  | 40 |    | 4          | 2054    | 71                   |             |      |
| 20   | 11                        | 38 | 30 | 13 | 1          | 9365590 | 21254                | 40          |      |
|      |                           | 3  | 40 |    | 3          | 2061    | 72                   |             |      |
| 30   | 11                        | 42 | 10 | 13 | 4          | 9367651 | 21182                | 30          |      |
|      |                           | 3  | 39 |    | 4          | 2069    | 72                   |             |      |
| 40   | 11                        | 45 | 49 | 13 | 8          | 9369720 | 21110                | 20          |      |
|      |                           | 3  | 39 |    | 4          | 2076    | 72                   |             |      |
| 50   | 11                        | 49 | 28 | 13 | 12         | 9371796 | 21038                | 10          |      |
|      |                           | 3  | 39 |    | 4          | 2083    | 72                   |             |      |
| 29   | 11                        | 53 | 7  | 13 | 16         | 9373879 | 20966                | 1           |      |
|      |                           | 3  | 38 |    | 4          | 2090    | 72                   |             |      |
| 10   | 11                        | 56 | 45 | 13 | 20         | 9375969 | 20894                | 50          |      |
|      |                           | 3  | 37 |    | 3          | 2097    | 73                   |             |      |
| 20   | 12                        | 0  | 22 | 13 | 23         | 9370866 | 20821                | 40          |      |
|      |                           | 3  | 37 |    | 4          | 2104    | 73                   |             |      |
| 30   | 12                        | 3  | 59 | 13 | 27         | 9380170 | 20748                | 30          |      |
|      |                           | 3  | 37 |    | 4          | 2111    | 73                   |             |      |
| 40   | 12                        | 7  | 36 | 13 | 31         | 9382281 | 20675                | 20          |      |
|      |                           | 3  | 36 |    | 4          | 2118    | 73                   |             |      |
| 50   | 12                        | 11 | 12 | 13 | 35         | 9384399 | 20602                | 10          |      |
|      |                           | 3  | 36 |    | 4          | 2125    | 74                   |             |      |
| 30   | 12                        | 14 | 48 | 13 | 39         | 9386524 | 20528                | 0           |      |
|      |                           | 3  | 35 |    | 3          | 2132    | 74                   |             |      |
| N ny |                           |    |    |    |            |         |                      |             |      |

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B 2



# CANON DECLINATIONIS REQVIR

| ♄    |                          | ♂          |    |                      |    |             |       |      |  |
|------|--------------------------|------------|----|----------------------|----|-------------|-------|------|--|
| Gr.  | Arcus cum<br>differentia | Dra<br>Ad. |    | Numerus<br>multipli. |    | Dra<br>Sub. |       | Gr.  |  |
| scr. | par                      | /          | // | /                    | // |             |       | scr. |  |
| 0    | 12                       | 14         | 48 | 13                   | 39 | 9386524     | 20528 | 30   |  |
| 10   | 12                       | 18         | 23 | 13                   | 42 | 9388656     | 20454 | 50   |  |
|      |                          | 3          | 34 |                      | 4  | 2138        | 74    |      |  |
| 20   | 12                       | 21         | 57 | 13                   | 46 | 9390794     | 20380 | 40   |  |
|      |                          | 3          | 35 |                      | 4  | 2144        | 74    |      |  |
| 30   | 12                       | 25         | 32 | 13                   | 50 | 9392938     | 20306 | 30   |  |
|      |                          | 3          | 34 |                      | 4  | 2151        | 74    |      |  |
| 40   | 12                       | 29         | 6  | 13                   | 54 | 9395089     | 20232 | 20   |  |
|      |                          | 3          | 33 |                      | 3  | 2157        | 75    |      |  |
| 50   | 12                       | 32         | 39 | 13                   | 57 | 9397246     | 20157 | 10   |  |
| I    | 12                       | 36         | 12 | 14                   | 1  | 9399409     | 20082 | 29   |  |
|      |                          | 3          | 32 |                      | 4  | 2169        | 75    |      |  |
| 10   | 12                       | 39         | 44 | 14                   | 5  | 9401578     | 20007 | 50   |  |
|      |                          | 3          | 32 |                      | 3  | 2175        | 75    |      |  |
| 20   | 12                       | 43         | 16 | 14                   | 8  | 9403753     | 19932 | 40   |  |
|      |                          | 3          | 31 |                      | 4  | 2182        | 75    |      |  |
| 30   | 12                       | 46         | 47 | 14                   | 12 | 9405935     | 19857 | 30   |  |
|      |                          | 3          | 31 |                      | 4  | 2188        | 76    |      |  |
| 40   | 12                       | 50         | 18 | 14                   | 16 | 9408123     | 19781 | 20   |  |
|      |                          | 3          | 31 |                      | 3  | 2194        | 76    |      |  |
| 50   | 12                       | 53         | 49 | 14                   | 19 | 9410317     | 19705 | 10   |  |
| 2    | 12                       | 57         | 19 | 14                   | 23 | 9412517     | 19629 | 28   |  |
|      |                          | 3          | 29 |                      | 3  | 2200        | 76    |      |  |
| 10   | 13                       | 0          | 48 | 14                   | 26 | 9414723     | 19553 | 50   |  |
|      |                          | 3          | 29 |                      | 4  | 2206        | 76    |      |  |
| 20   | 13                       | 4          | 17 | 14                   | 30 | 9416934     | 19477 | 40   |  |
|      |                          | 3          | 28 |                      | 4  | 2211        | 76    |      |  |
| 30   | 13                       | 7          | 45 | 14                   | 34 | 9419151     | 19401 | 30   |  |
|      |                          | 3          | 29 |                      | 4  | 2217        | 76    |      |  |
| 40   | 13                       | 11         | 14 | 14                   | 38 | 9421373     | 19324 | 20   |  |
|      |                          | 3          | 28 |                      | 3  | 2222        | 77    |      |  |
| 50   | 13                       | 14         | 42 | 14                   | 41 | 9423600     | 19247 | 10   |  |
| 3    | 13                       | 18         | 10 | 14                   | 45 | 9425832     | 19170 | 27   |  |
|      |                          | 3          | 27 |                      |    | 2227        | 77    |      |  |
|      |                          |            |    |                      |    | 2232        | 77    |      |  |
|      |                          |            |    |                      |    | 2238        | 77    |      |  |
| K    |                          | m          |    |                      |    |             |       |      |  |



NOCTIALIS AB ECLIPTICA. 7

| ♌    |                          | ♍          |    |                      |    |             |       |      |  |
|------|--------------------------|------------|----|----------------------|----|-------------|-------|------|--|
| Gr.  | Arcus cum<br>differentia | Dra<br>Ad. |    | Numerus<br>multipli. |    | Dra<br>Sub. |       | Gr.  |  |
| scr. | par                      | /          | // | /                    | // |             |       | scr. |  |
| 3    | 13                       | 18         | 10 | 14                   | 45 | 9425832     | 19170 | 27   |  |
| 10   | 13                       | 21         | 37 | 14                   | 49 | 9428070     | 19093 | 50   |  |
|      |                          | 3          | 26 |                      | 3  | 2243        | 77    |      |  |
| 20   | 13                       | 25         | 3  | 14                   | 52 | 9430313     | 19016 | 40   |  |
|      |                          | 3          | 26 |                      | 3  | 2248        | 77    |      |  |
| 30   | 13                       | 28         | 29 | 14                   | 55 | 9432561     | 18939 | 30   |  |
|      |                          | 3          | 25 |                      | 4  | 2253        | 78    |      |  |
| 40   | 13                       | 31         | 54 | 14                   | 59 | 9434814     | 18861 | 20   |  |
|      |                          | 3          | 24 |                      | 3  | 2258        | 78    |      |  |
| 50   | 13                       | 35         | 18 | 15                   | 2  | 9437072     | 18783 | 10   |  |
|      |                          | 3          | 24 |                      | 4  | 2263        | 78    |      |  |
| 4    | 13                       | 38         | 42 | 15                   | 6  | 9439335     | 18705 | 26   |  |
|      |                          | 3          | 23 |                      | 3  | 2268        | 78    |      |  |
| 10   | 13                       | 42         | 5  | 15                   | 9  | 9441603     | 18627 | 50   |  |
|      |                          | 3          | 23 |                      | 4  | 2273        | 78    |      |  |
| 20   | 13                       | 45         | 28 | 15                   | 13 | 9443876     | 18549 | 40   |  |
|      |                          | 3          | 23 |                      | 3  | 2277        | 78    |      |  |
| 30   | 13                       | 48         | 51 | 15                   | 16 | 9446153     | 18471 | 30   |  |
|      |                          | 3          | 22 |                      | 3  | 2282        | 78    |      |  |
| 40   | 13                       | 52         | 13 | 15                   | 19 | 9448435     | 18393 | 20   |  |
|      |                          | 3          | 22 |                      | 4  | 2286        | 79    |      |  |
| 50   | 13                       | 55         | 35 | 15                   | 23 | 9450721     | 18314 | 10   |  |
|      |                          | 3          | 22 |                      | 3  | 2291        | 79    |      |  |
| 5    | 13                       | 58         | 57 | 15                   | 26 | 9453012     | 18235 | 25   |  |
|      |                          | 3          | 20 |                      | 4  | 2295        | 79    |      |  |
| 10   | 14                       | 2          | 17 | 15                   | 30 | 9455307     | 18156 | 50   |  |
|      |                          | 3          | 20 |                      | 3  | 2299        | 79    |      |  |
| 20   | 14                       | 5          | 37 | 15                   | 33 | 9457606     | 18077 | 40   |  |
|      |                          | 3          | 20 |                      | 3  | 2303        | 79    |      |  |
| 30   | 14                       | 8          | 57 | 15                   | 36 | 9459909     | 17998 | 30   |  |
|      |                          | 3          | 19 |                      | 4  | 2307        | 79    |      |  |
| 40   | 14                       | 12         | 16 | 15                   | 40 | 9462216     | 17919 | 20   |  |
|      |                          | 3          | 19 |                      | 3  | 2312        | 79    |      |  |
| 50   | 14                       | 15         | 35 | 15                   | 43 | 9464528     | 17840 | 10   |  |
|      |                          | 3          | 18 |                      | 3  | 2315        | 79    |      |  |
| 6    | 14                       | 18         | 53 | 15                   | 46 | 9466843     | 17761 | 24   |  |
|      |                          | 3          | 7  |                      | 4  | 2319        | 79    |      |  |

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# CANON DECLINATIONVM EQVIA

|      |      | ♋                |    |  |  | ♎           |    |                      |              |      |  |
|------|------|------------------|----|--|--|-------------|----|----------------------|--------------|------|--|
| Gr.  |      | Arcus cū<br>d̄ra |    |  |  | D̄ra<br>Ad. |    | Numerus<br>multipli. | D̄ra<br>Sub. | Gr.  |  |
| scr. | par. | /                | // |  |  | /           | // |                      |              | scr. |  |
| 6    | 14   | 18               | 53 |  |  | 15          | 46 | 9466843              | 17761        | 24   |  |
| 10   | 14   | 22               | 10 |  |  | 15          | 50 | 9469162              | 17682        | 50   |  |
|      |      | 3                | 17 |  |  |             | 3  | 2323                 | 79           |      |  |
| 20   | 14   | 25               | 27 |  |  | 15          | 53 | 9471485              | 17603        | 40   |  |
|      |      | 3                | 16 |  |  |             | 3  | 2326                 | 80           |      |  |
| 30   | 14   | 28               | 43 |  |  | 15          | 56 | 9473811              | 17523        | 30   |  |
|      |      | 3                | 16 |  |  |             | 4  | 2330                 | 80           |      |  |
| 40   | 14   | 31               | 59 |  |  | 16          | 0  | 9476141              | 17443        | 20   |  |
|      |      | 3                | 16 |  |  |             | 3  | 2333                 | 80           |      |  |
| 50   | 14   | 35               | 15 |  |  | 16          | 3  | 9478474              | 17363        | 10   |  |
|      |      | 3                | 16 |  |  |             | 3  | 2337                 | 80           |      |  |
| 7    | 14   | 38               | 31 |  |  | 16          | 6  | 9480811              | 17283        | 23   |  |
|      |      | 3                | 14 |  |  |             | 3  | 2340                 | 80           |      |  |
| 10   | 14   | 41               | 45 |  |  | 16          | 9  | 9483151              | 17203        | 50   |  |
|      |      | 3                | 14 |  |  |             | 3  | 2343                 | 80           |      |  |
| 20   | 14   | 44               | 59 |  |  | 16          | 12 | 9485494              | 17123        | 40   |  |
|      |      | 3                | 13 |  |  |             | 4  | 2346                 | 80           |      |  |
| 30   | 14   | 48               | 12 |  |  | 16          | 16 | 9487840              | 17143        | 30   |  |
|      |      | 3                | 13 |  |  |             | 3  | 2349                 | 80           |      |  |
| 40   | 14   | 51               | 25 |  |  | 16          | 19 | 9490189              | 16963        | 20   |  |
|      |      | 3                | 13 |  |  |             | 3  | 2352                 | 80           |      |  |
| 50   | 14   | 54               | 38 |  |  | 16          | 22 | 9492541              | 16883        | 10   |  |
|      |      | 3                | 12 |  |  |             | 4  | 2356                 | 81           |      |  |
| 8    | 14   | 57               | 50 |  |  | 16          | 25 | 9494897              | 16802        | 22   |  |
|      |      | 3                | 11 |  |  |             | 3  | 2359                 | 81           |      |  |
| 10   | 15   | 1                | 1  |  |  | 16          | 28 | 9497256              | 16721        | 50   |  |
|      |      | 3                | 11 |  |  |             | 4  | 2361                 | 81           |      |  |
| 20   | 15   | 4                | 12 |  |  | 16          | 32 | 9499617              | 16640        | 40   |  |
|      |      | 3                | 10 |  |  |             | 3  | 2364                 | 81           |      |  |
| 30   | 15   | 7                | 22 |  |  | 16          | 35 | 9501981              | 16559        | 30   |  |
|      |      | 3                | 10 |  |  |             | 3  | 2366                 | 81           |      |  |
| 40   | 15   | 10               | 32 |  |  | 16          | 38 | 9504347              | 16478        | 20   |  |
|      |      | 3                | 9  |  |  |             | 3  | 2369                 | 81           |      |  |
| 50   | 15   | 13               | 41 |  |  | 16          | 41 | 9506716              | 16397        | 10   |  |
|      |      | 3                | 8  |  |  |             | 3  | 2371                 | 81           |      |  |
| 9    | 15   | 16               | 49 |  |  | 16          | 44 | 9509087              | 16316        | 21   |  |
|      |      | 3                | 8  |  |  |             | 3  | 2373                 | 81           |      |  |
|      |      | ♊                |    |  |  | ♏           |    |                      |              |      |  |



NOCTIALIS AB ECLIPTICA. 8

| ♈    |             | ♎   |    |           |    |         |       |      |  |
|------|-------------|-----|----|-----------|----|---------|-------|------|--|
| Gr.  | Arcus cum   | Dra |    | Numerus   |    | Dra     |       | Gr.  |  |
| scr. | differentia | Ad. |    | multipli. |    | Sub.    |       | scr. |  |
|      | par         | /   | // | /         | // |         |       |      |  |
| 19   | 15          | 16  | 49 | 16        | 44 | 9509087 | 16316 | 21   |  |
| 10   | 15          | 19  | 57 | 16        | 47 | 9511460 | 16235 | 50   |  |
|      |             | 3   | 7  |           | 3  | 2376    | 81    |      |  |
| 20   | 15          | 23  | 4  | 16        | 50 | 9513836 | 16124 | 40   |  |
|      |             | 3   | 7  |           | 3  | 2378    | 81    |      |  |
| 30   | 15          | 26  | 11 | 16        | 53 | 9516214 | 16073 | 30   |  |
|      |             | 3   | 7  |           | 3  | 2380    | 81    |      |  |
| 40   | 15          | 29  | 18 | 16        | 56 | 9518594 | 15992 | 20   |  |
|      |             | 3   | 6  |           | 3  | 2383    | 81    |      |  |
| 50   | 15          | 32  | 24 | 16        | 59 | 9520977 | 15911 | 10   |  |
|      |             | 3   | 6  |           | 3  | 2384    | 82    |      |  |
| 10   | 15          | 35  | 30 | 17        | 2  | 9523361 | 15829 | 20   |  |
|      |             | 3   | 5  |           | 3  | 2386    | 81    |      |  |
| 10   | 15          | 38  | 35 | 17        | 5  | 9526747 | 15748 | 50   |  |
|      |             | 3   | 4  |           | 3  | 2388    | 81    |      |  |
| 20   | 15          | 41  | 39 | 17        | 8  | 9529135 | 15667 | 40   |  |
|      |             | 3   | 4  |           | 3  | 2390    | 82    |      |  |
| 30   | 15          | 44  | 43 | 17        | 11 | 9531525 | 15585 | 30   |  |
|      |             | 3   | 3  |           | 3  | 2391    | 81    |      |  |
| 40   | 15          | 47  | 46 | 17        | 14 | 9533916 | 15504 | 20   |  |
|      |             | 3   | 3  |           | 3  | 2393    | 82    |      |  |
| 50   | 15          | 50  | 49 | 17        | 17 | 9536309 | 15422 | 10   |  |
|      |             | 3   | 2  |           | 3  | 2392    | 81    |      |  |
| 11   | 15          | 53  | 51 | 17        | 20 | 9537701 | 15341 | 19   |  |
|      |             | 3   | 1  |           | 3  | 2394    | 82    |      |  |
| 10   | 15          | 56  | 52 | 17        | 23 | 9540095 | 15259 | 50   |  |
|      |             | 3   | 1  |           | 3  | 2396    | 82    |      |  |
| 20   | 15          | 59  | 53 | 17        | 26 | 9542491 | 15177 | 40   |  |
|      |             | 3   | 0  |           | 3  | 2397    | 81    |      |  |
| 30   | 16          | 2   | 53 | 17        | 29 | 9544888 | 15096 | 30   |  |
|      |             | 3   | 0  |           | 3  | 2399    | 82    |      |  |
| 40   | 16          | 5   | 53 | 17        | 32 | 9547287 | 15014 | 20   |  |
|      |             | 3   | 0  |           | 3  | 2401    | 82    |      |  |
| 50   | 16          | 8   | 53 | 17        | 35 | 9549688 | 14932 | 10   |  |
|      |             | 2   | 59 |           | 3  | 2402    | 82    |      |  |
| 12   | 16          | 11  | 52 | 17        | 38 | 9552090 | 14850 | 18   |  |
|      |             | 2   | 58 |           | 3  | 2043    | 81    |      |  |
|      |             | ♊   |    | ♏         |    |         |       |      |  |



# CANON DECLINATIONVM EQVIO

| ♄    |                           |    |    | ♍          |    |                      |             |       |      |  |  |
|------|---------------------------|----|----|------------|----|----------------------|-------------|-------|------|--|--|
| Gr.  | Arcus cum<br>differentia. |    |    | Dra<br>Ad. |    | Numerus<br>multipli. | Dra<br>Sub. |       | Gr.  |  |  |
| scr. | par                       | /  | // | /          | // |                      |             |       | scr. |  |  |
| 12   | 16                        | 11 | 52 | 17         | 38 | 9552090              |             | 14850 | 18   |  |  |
| 10   | 16                        | 14 | 50 | 17         | 41 | 9554493              |             | 14769 | 50   |  |  |
|      |                           | 2  | 57 |            | 3  | 2404                 |             | 82    |      |  |  |
| 20   | 16                        | 17 | 47 | 17         | 44 | 9556897              |             | 14687 | 40   |  |  |
|      |                           | 2  | 57 |            | 3  | 2405                 |             | 82    |      |  |  |
| 30   | 16                        | 20 | 44 | 17         | 47 | 9559301              |             | 14605 | 30   |  |  |
|      |                           | 2  | 57 |            | 2  | 2404                 |             | 81    |      |  |  |
| 40   | 16                        | 23 | 41 | 17         | 49 | 9561705              |             | 14524 | 20   |  |  |
|      |                           | 2  | 56 |            | 3  | 2404                 |             | 82    |      |  |  |
| 50   | 16                        | 26 | 37 | 17         | 52 | 9564109              |             | 14442 | 10   |  |  |
| I    |                           | 2  | 56 |            | 3  | 2400                 |             | 82    |      |  |  |
| 13   | 16                        | 29 | 33 | 17         | 55 | 9566514              |             | 14360 | 17   |  |  |
|      |                           | 2  | 55 |            | 3  | 2405                 |             | 81    |      |  |  |
| 10   | 16                        | 32 | 28 | 17         | 58 | 9568919              |             | 14279 | 50   |  |  |
|      |                           | 2  | 54 |            | 3  | 2405                 |             | 82    |      |  |  |
| 20   | 16                        | 35 | 22 | 18         | 1  | 9571324              |             | 14197 | 40   |  |  |
|      |                           | 2  | 54 |            | 2  | 2406                 |             | 82    |      |  |  |
| 30   | 16                        | 38 | 16 | 18         | 3  | 9573730              |             | 14115 | 30   |  |  |
|      |                           | 2  | 53 |            | 3  | 2406                 |             | 81    |      |  |  |
| 40   | 16                        | 41 | 9  | 18         | 6  | 9576136              |             | 14034 | 20   |  |  |
|      |                           | 2  | 52 |            | 3  | 2406                 |             | 82    |      |  |  |
| 50   | 16                        | 44 | 1  | 18         | 9  | 9578542              |             | 13952 | 10   |  |  |
|      |                           | 2  | 52 |            | 3  | 2405                 |             | 81    |      |  |  |
| 14   | 16                        | 46 | 53 | 18         | 12 | 9580947              |             | 13871 | 16   |  |  |
|      |                           | 2  | 51 |            | 2  | 2406                 |             | 82    |      |  |  |
| 10   | 16                        | 49 | 44 | 18         | 14 | 9583353              |             | 13789 | 50   |  |  |
|      |                           | 2  | 51 |            | 3  | 2405                 |             | 81    |      |  |  |
| 20   | 16                        | 52 | 35 | 18         | 17 | 9585758              |             | 13708 | 40   |  |  |
|      |                           | 2  | 50 |            | 3  | 2405                 |             | 81    |      |  |  |
| 30   | 16                        | 55 | 25 | 18         | 20 | 9588163              |             | 13627 | 30   |  |  |
|      |                           | 2  | 50 |            | 3  | 2404                 |             | 82    |      |  |  |
| 40   | 16                        | 58 | 15 | 18         | 23 | 9590567              |             | 13545 | 20   |  |  |
|      |                           | 2  | 49 |            | 2  | 2404                 |             | 81    |      |  |  |
| 50   | 17                        | 1  | 4  | 18         | 25 | 9592971              |             | 13464 | 10   |  |  |
|      |                           | 2  | 49 |            | 3  | 2404                 |             | 81    |      |  |  |
| 15   | 17                        | 3  | 53 | 18         | 28 | 9595375              |             | 13383 | 15   |  |  |
|      |                           | 2  | 48 |            | 2  | 2403                 |             | 81    |      |  |  |
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| Gr.            | Arcus cum<br>differentia. |    |    |    | Dra<br>Ad. |         | Numerus<br>multipli. | Dra<br>Sub. | Gr.  |
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| scr.           | par                       | /  | // | /  | //         |         |                      |             | scr. |
| 15             | 17                        | 3  | 53 | 18 | 28         | 9595375 | 13383                | 15          |      |
| 10             | 17                        | 6  | 41 | 18 | 30         | 9597778 | 13302                | 50          |      |
|                |                           | 2  | 47 |    | 3          | 2403    | 81                   |             |      |
| 20             | 17                        | 9  | 28 | 18 | 33         | 9600181 | 13221                | 40          |      |
|                |                           | 2  | 47 |    | 2          | 2402    | 81                   |             |      |
| 30             | 17                        | 12 | 15 | 18 | 35         | 9602583 | 13140                | 30          |      |
|                |                           | 2  | 46 |    | 3          | 2401    | 81                   |             |      |
| 40             | 17                        | 15 | 1  | 18 | 38         | 9604984 | 13059                | 20          |      |
|                |                           | 2  | 46 |    | 2          | 2400    | 81                   |             |      |
| 50             | 17                        | 17 | 47 | 18 | 40         | 9607384 | 12978                | 10          |      |
|                |                           | 2  | 46 |    | 3          | 2399    | 81                   |             |      |
| 16             | 17                        | 20 | 33 | 18 | 43         | 9609783 | 12897                | 14          |      |
|                |                           | 2  | 45 |    | 3          | 2398    | 81                   |             |      |
| 10             | 17                        | 23 | 18 | 18 | 46         | 9612181 | 12816                | 50          |      |
|                |                           | 2  | 44 |    | 2          | 2397    | 81                   |             |      |
| 20             | 17                        | 26 | 2  | 18 | 48         | 9614578 | 12735                | 40          |      |
|                |                           | 2  | 44 |    | 3          | 2396    | 80                   |             |      |
| 30             | 17                        | 28 | 46 | 18 | 51         | 9616974 | 12655                | 30          |      |
|                |                           | 2  | 43 |    | 3          | 2394    | 81                   |             |      |
| 40             | 17                        | 31 | 29 | 18 | 54         | 9619368 | 12574                | 20          |      |
|                |                           | 2  | 42 |    | 2          | 2393    | 81                   |             |      |
| 50             | 17                        | 34 | 11 | 18 | 56         | 9621761 | 12493                | 10          |      |
|                |                           | 2  | 41 |    | 3          | 2391    | 80                   |             |      |
| 17             | 17                        | 36 | 52 | 18 | 59         | 9624152 | 12413                | 13          |      |
|                |                           | 2  | 41 |    | 2          | 2390    | 81                   |             |      |
| 10             | 17                        | 39 | 33 | 19 | 1          | 9626542 | 12332                | 50          |      |
|                |                           | 2  | 40 |    | 3          | 2388    | 80                   |             |      |
| 20             | 17                        | 42 | 13 | 19 | 4          | 9628930 | 12252                | 40          |      |
|                |                           | 2  | 40 |    | 2          | 2386    | 80                   |             |      |
| 30             | 17                        | 44 | 53 | 19 | 6          | 9631316 | 12172                | 30          |      |
|                |                           | 2  | 40 |    | 3          | 2385    | 81                   |             |      |
| 40             | 17                        | 47 | 33 | 19 | 9          | 9633701 | 12091                | 20          |      |
|                |                           | 2  | 39 |    | 2          | 2383    | 80                   |             |      |
| 50             | 17                        | 50 | 12 | 19 | 11         | 9636084 | 12011                | 10          |      |
|                |                           | 2  | 38 |    | 2          | 2381    | 80                   |             |      |
| 18             | 17                        | 52 | 50 | 19 | 13         | 9638465 | 11931                | 12          |      |
|                |                           | 2  | 37 |    | 3          | 2379    | 80                   |             |      |
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| Gr.  | Arcus cum<br>differentia |    |    | Dra<br>Ad. |    |                      |             |      |
| scr. | par                      | /  | // | /          | // |                      |             | scr. |
| 18   | 17                       | 52 | 50 | 19         | 13 | 9638465              | 11931       | 12   |
| 10   | 17                       | 55 | 27 | 19         | 16 | 9640844              | 11851       | 50   |
|      |                          | 2  | 37 |            | 2  | 2377                 | 80          |      |
| 20   | 17                       | 58 | 4  | 19         | 18 | 9643221              | 11771       | 40   |
|      |                          | 2  | 36 |            | 3  | 2375                 | 80          |      |
| 30   | 18                       | 0  | 40 | 19         | 21 | 9645596              | 11691       | 30   |
|      |                          | 2  | 36 |            | 2  | 2372                 | 80          |      |
| 40   | 18                       | 3  | 16 | 19         | 23 | 9647968              | 11611       | 20   |
|      |                          | 2  | 35 |            | 3  | 2370                 | 80          |      |
| 50   | 18                       | 5  | 51 | 19         | 26 | 9650338              | 11531       | 10   |
|      |                          | 2  | 35 |            | 2  | 2367                 | 79          |      |
| 19   | 18                       | 8  | 26 | 19         | 28 | 9652705              | 11452       | II   |
|      |                          | 2  | 34 |            | 3  | 2365                 | 80          |      |
| 10   | 18                       | 11 | 0  | 19         | 31 | 9655070              | 11372       | 50   |
|      |                          | 2  | 33 |            | 2  | 2362                 | 79          |      |
| 20   | 18                       | 13 | 33 | 19         | 33 | 9657432              | 11293       | 40   |
|      |                          | 2  | 33 |            | 2  | 2359                 | 79          |      |
| 30   | 18                       | 16 | 6  | 19         | 35 | 9659791              | 11214       | 30   |
|      |                          | 2  | 32 |            | 3  | 2356                 | 79          |      |
| 40   | 18                       | 18 | 38 | 19         | 38 | 9662147              | 11135       | 20   |
|      |                          | 2  | 32 |            | 2  | 2354                 | 79          |      |
| 50   | 18                       | 21 | 10 | 19         | 40 | 9664501              | 11056       | 10   |
|      |                          | 2  | 31 |            | 2  | 2351                 | 79          |      |
| 20   | 18                       | 23 | 41 | 19         | 42 | 9666852              | 10977       | 10   |
|      |                          | 2  | 31 |            | 2  | 2348                 | 79          |      |
| 10   | 18                       | 26 | 12 | 19         | 44 | 9669200              | 10898       | 50   |
|      |                          | 2  | 30 |            | 2  | 2345                 | 79          |      |
| 20   | 18                       | 28 | 42 | 19         | 46 | 9671545              | 10819       | 40   |
|      |                          | 2  | 29 |            | 3  | 2342                 | 79          |      |
| 30   | 18                       | 31 | 11 | 19         | 49 | 9673887              | 10740       | 30   |
|      |                          | 2  | 29 |            | 2  | 2339                 | 78          |      |
| 40   | 18                       | 33 | 40 | 19         | 51 | 9676226              | 10662       | 20   |
|      |                          | 2  | 28 |            | 2  | 2335                 | 78          |      |
| 50   | 18                       | 36 | 8  | 19         | 53 | 9678561              | 10584       | 10   |
|      |                          | 2  | 27 |            | 2  | 2332                 | 78          |      |
| 21   | 18                       | 38 | 35 | 19         | 55 | 9680893              | 10506       | 9    |
|      |                          | 2  | 27 |            | 3  | 2329                 | 78          |      |
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| Arcus cum<br>differentia. |      |     |    | Dra<br>Ad. |    | Numerus<br>multipli. | Dra<br>Sub. | Gr. |
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| Gr.                       | scr. | par | /  | //         | /  |                      |             |     |
| 21                        | 18   | 38  | 35 | 19         | 55 | 9680893              | 10506       | 9   |
| 10                        | 18   | 41  | 2  | 19         | 58 | 9683222              | 10428       | 50  |
|                           |      | 2   | 26 |            | 2  | 2315                 | 78          |     |
| 20                        | 18   | 43  | 28 | 20         | 0  | 9685547              | 10350       | 40  |
|                           |      | 2   | 26 |            | 2  | 2322                 | 78          |     |
| 30                        | 18   | 45  | 54 | 20         | 2  | 9687869              | 10272       | 30  |
|                           |      | 2   | 25 |            | 3  | 2318                 | 78          |     |
| 40                        | 18   | 48  | 19 | 20         | 5  | 9690187              | 10194       | 20  |
|                           |      | 2   | 24 |            | 2  | 2314                 | 77          |     |
| 50                        | 18   | 50  | 43 | 20         | 7  | 9692501              | 10117       | 10  |
|                           |      | 2   | 24 |            | 2  | 2311                 | 77          |     |
| 22                        | 18   | 53  | 7  | 20         | 9  | 9694812              | 10040       | 8   |
|                           |      | 2   | 23 |            | 2  | 2307                 | 77          |     |
| 10                        | 18   | 55  | 30 | 20         | 11 | 9697119              | 9963        | 50  |
|                           |      | 2   | 23 |            | 2  | 2303                 | 76          |     |
| 20                        | 18   | 57  | 53 | 20         | 13 | 9699422              | 9886        | 40  |
|                           |      | 2   | 22 |            | 3  | 2298                 | 77          |     |
| 30                        | 19   | 0   | 15 | 20         | 16 | 9701720              | 9809        | 30  |
|                           |      | 2   | 21 |            | 2  | 2294                 | 77          |     |
| 40                        | 19   | 2   | 36 | 20         | 18 | 9704014              | 9732        | 20  |
|                           |      | 2   | 21 |            | 2  | 2289                 | 77          |     |
| 50                        | 19   | 4   | 57 | 20         | 20 | 9706303              | 9655        | 10  |
|                           |      | 2   | 21 |            | 2  | 2285                 | 76          |     |
| 23                        | 19   | 7   | 18 | 20         | 22 | 9708588              | 9579        | 7   |
|                           |      | 2   | 20 |            | 2  | 2281                 | 76          |     |
| 10                        | 19   | 9   | 38 | 20         | 24 | 9710869              | 9563        | 50  |
|                           |      | 2   | 19 |            | 2  | 2277                 | 76          |     |
| 20                        | 19   | 11  | 57 | 20         | 26 | 9713146              | 9427        | 40  |
|                           |      | 2   | 18 |            | 2  | 2263                 | 76          |     |
| 30                        | 19   | 14  | 15 | 20         | 28 | 9715419              | 9351        | 30  |
|                           |      | 2   | 18 |            | 2  | 2268                 | 76          |     |
| 40                        | 19   | 16  | 33 | 20         | 30 | 9717687              | 9275        | 20  |
|                           |      | 2   | 17 |            | 2  | 2264                 | 76          |     |
| 50                        | 19   | 18  | 50 | 20         | 32 | 9719951              | 9199        | 10  |
|                           |      | 2   | 17 |            | 2  | 2258                 | 75          |     |
| 24                        | 19   | 21  | 7  | 20         | 34 | 9722209              | 9124        | 6   |
|                           |      | 2   | 16 |            |    | 2253                 | 75          |     |

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| Gr.  | Arcus cum<br>differentia |    |    | Dra<br>Ad. |    |                       |             |      |
| scr. | par                      | /  | // | /          | // |                       |             | scr. |
| 24   | 19                       | 21 | 7  | 20         | 34 | 9722209               | 9124        | 6    |
| 10   | 19                       | 23 | 23 | 20         | 36 | 9722462               | 9049        | 50   |
|      |                          | 2  | 15 |            | 2  | 2249                  | 75          |      |
| 20   | 19                       | 25 | 38 | 20         | 38 | 9724711               | 8974        | 40   |
|      |                          | 2  | 15 |            | 2  | 2244                  | 75          |      |
| 30   | 19                       | 27 | 53 | 20         | 40 | 9726955               | 8899        | 30   |
|      |                          | 2  | 14 |            | 2  | 2239                  | 75          |      |
| 40   | 19                       | 30 | 7  | 20         | 42 | 9729194               | 8824        | 20   |
|      |                          | 2  | 13 |            | 2  | 2234                  | 74          |      |
| 50   | 19                       | 32 | 20 | 20         | 44 | 9731428               | 8750        | 10   |
|      |                          | 2  | 13 |            | 2  | 2229                  | 74          |      |
| 25   | 19                       | 34 | 33 | 20         | 46 | 9735657               | 8676        | 5    |
|      |                          | 2  | 12 |            | 2  | 2224                  | 74          |      |
| 10   | 19                       | 36 | 45 | 20         | 48 | 9737881               | 8602        | 50   |
|      |                          | 2  | 11 |            | 2  | 2218                  | 74          |      |
| 20   | 19                       | 38 | 56 | 20         | 50 | 9740099               | 8528        | 40   |
|      |                          | 2  | 11 |            | 2  | 2213                  | 74          |      |
| 30   | 19                       | 41 | 7  | 20         | 52 | 9742312               | 8454        | 30   |
|      |                          | 2  | 11 |            | 1  | 2208                  | 74          |      |
| 40   | 19                       | 43 | 18 | 20         | 53 | 9744520               | 8380        | 20   |
|      |                          | 2  | 10 |            | 2  | 2202                  | 73          |      |
| 50   | 19                       | 45 | 28 | 20         | 55 | 9746722               | 8307        | 10   |
|      |                          | 2  | 10 |            | 2  | 2196                  | 73          |      |
| 26   | 19                       | 47 | 38 | 20         | 57 | 9748918               | 8234        | 4    |
|      |                          | 2  | 9  |            | 2  | 2190                  | 73          |      |
| 10   | 19                       | 49 | 47 | 20         | 59 | 9751108               | 8161        | 50   |
|      |                          | 2  | 8  |            | 2  | 2185                  | 73          |      |
| 20   | 19                       | 51 | 55 | 21         | 1  | 9753293               | 8088        | 40   |
|      |                          | 2  | 7  |            | 1  | 2179                  | 72          |      |
| 30   | 19                       | 54 | 2  | 21         | 2  | 9755472               | 8016        | 30   |
|      |                          | 2  | 7  |            | 2  | 2173                  | 72          |      |
| 40   | 19                       | 56 | 9  | 21         | 4  | 9757645               | 7944        | 20   |
|      |                          | 2  | 6  |            | 2  | 2167                  | 72          |      |
| 50   | 19                       | 58 | 15 | 21         | 6  | 9759812               | 7872        | 10   |
|      |                          | 2  | 6  |            | 2  | 2162                  | 72          |      |
| 27   | 20                       | 0  | 21 | 21         | 8  | 9761974               | 7800        | 3    |
|      |                          | 2  | 5  |            | 2  | 2155                  | 71          |      |
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| Gr.  | Arcus cum   | Dra |    | Numerus   |    | Dra     |      | Gr.  |  |  |  |
| scr. | differentia | Ad. |    | multipli. |    | Sub.    |      | scr. |  |  |  |
|      | par         | /   | // | /         | // |         |      |      |  |  |  |
| 27   | 20          | 0   | 21 | 21        | 8  | 9761974 | 7800 | 3    |  |  |  |
| 10   | 20          | 2   | 26 | 21        | 10 | 9764129 | 7729 | 50   |  |  |  |
|      |             | 2   | 4  |           | 1  | 2149    | 71   |      |  |  |  |
| 20   | 20          | 4   | 30 | 21        | 11 | 9766278 | 7658 | 40   |  |  |  |
|      |             | 2   | 4  |           | 2  | 2143    | 71   |      |  |  |  |
| 30   | 20          | 6   | 34 | 21        | 13 | 9768421 | 7587 | 30   |  |  |  |
|      |             | 2   | 3  |           | 2  | 2137    | 71   |      |  |  |  |
| 40   | 20          | 8   | 37 | 21        | 15 | 9770558 | 7516 | 20   |  |  |  |
|      |             | 2   | 2  |           | 2  | 2131    | 71   |      |  |  |  |
| 50   | 20          | 10  | 39 | 21        | 17 | 9772689 | 7445 | 10   |  |  |  |
|      |             | 2   | 2  |           | 2  | 2124    | 70   |      |  |  |  |
| 28   | 20          | 12  | 41 | 21        | 19 | 9774813 | 7375 | 2    |  |  |  |
|      |             | 2   | 1  |           | 1  | 2117    | 70   |      |  |  |  |
| 10   | 20          | 14  | 42 | 21        | 20 | 9776930 | 7305 | 50   |  |  |  |
|      |             | 2   | 0  |           | 2  | 2111    | 70   |      |  |  |  |
| 20   | 20          | 16  | 42 | 21        | 22 | 9779041 | 7235 | 40   |  |  |  |
|      |             | 2   | 0  |           | 2  | 2104    | 70   |      |  |  |  |
| 30   | 20          | 18  | 42 | 21        | 24 | 9781145 | 7165 | 30   |  |  |  |
|      |             | 1   | 59 |           | 1  | 2098    | 70   |      |  |  |  |
| 40   | 20          | 20  | 41 | 21        | 25 | 9783243 | 7095 | 20   |  |  |  |
|      |             | 1   | 59 |           | 2  | 2091    | 69   |      |  |  |  |
| 50   | 20          | 22  | 40 | 21        | 27 | 9785334 | 7026 | 10   |  |  |  |
|      |             | 1   | 59 |           | 2  | 2085    | 69   |      |  |  |  |
| 29   | 20          | 24  | 39 | 21        | 29 | 9787419 | 6957 | 1    |  |  |  |
|      |             | 1   | 58 |           | 1  | 2078    | 69   |      |  |  |  |
| 10   | 20          | 26  | 37 | 21        | 30 | 9789497 | 6888 | 50   |  |  |  |
|      |             | 1   | 57 |           | 2  | 2071    | 69   |      |  |  |  |
| 20   | 20          | 28  | 34 | 21        | 32 | 9791568 | 6819 | 40   |  |  |  |
|      |             | 1   | 56 |           | 2  | 2063    | 68   |      |  |  |  |
| 30   | 20          | 30  | 30 | 21        | 34 | 9793631 | 6751 | 30   |  |  |  |
|      |             | 1   | 56 |           | 1  | 2056    | 68   |      |  |  |  |
| 40   | 20          | 32  | 26 | 21        | 35 | 9795687 | 6683 | 20   |  |  |  |
|      |             | 1   | 55 |           | 2  | 2048    | 68   |      |  |  |  |
| 50   | 20          | 34  | 21 | 21        | 37 | 9797735 | 6615 | 10   |  |  |  |
|      |             | 1   | 54 |           | 2  | 2041    | 67   |      |  |  |  |
| 30   | 20          | 36  | 15 | 21        | 39 | 9799776 | 6548 | 0    |  |  |  |
|      |             | 1   | 54 |           | 1  | 2034    | 67   |      |  |  |  |

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| II   |                 |    |    | I          |    | Numerus<br>multipli. | Dra<br>Sub. | Gr.  |
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| Gr.  | Arcus cū<br>dra |    |    | Dra<br>Ad. |    |                      |             |      |
| scr. | par.            | /  | // | /          | // |                      |             | scr. |
| O    | 20              | 36 | 15 | 21         | 39 | 9799776              | 6548        | 30   |
| 10   | 20              | 38 | 9  | 21         | 40 | 9801810              | 6481        | 50   |
|      |                 | 1  | 53 |            | 2  | 2027                 | 67          |      |
| 20   | 20              | 40 | 2  | 21         | 42 | 9803837              | 6414        | 40   |
|      |                 | 1  | 53 |            | 2  | 2020                 | 67          |      |
| 30   | 20              | 41 | 55 | 21         | 44 | 9805857              | 6347        | 30   |
|      |                 | 1  | 52 |            | 1  | 2012                 | 66          |      |
| 40   | 20              | 43 | 47 | 21         | 45 | 9807869              | 6281        | 20   |
|      |                 | 1  | 51 |            | 2  | 2005                 | 66          |      |
| 50   | 20              | 45 | 38 | 21         | 47 | 9809874              | 6215        | 10   |
|      |                 | 1  | 51 |            | 2  | 1997                 | 66          |      |
| 1    | 20              | 47 | 29 | 21         | 49 | 9811871              | 6149        | 29   |
|      |                 | 1  | 50 |            | 1  | 1990                 | 66          |      |
| 10   | 20              | 49 | 19 | 21         | 50 | 9813861              | 6083        | 50   |
|      |                 | 1  | 49 |            | 2  | 1982                 | 65          |      |
| 20   | 20              | 51 | 8  | 21         | 52 | 9815843              | 6018        | 40   |
|      |                 | 1  | 49 |            | 1  | 1974                 | 65          |      |
| 30   | 20              | 52 | 57 | 21         | 53 | 9817817              | 5953        | 30   |
|      |                 | 1  | 48 |            | 2  | 1966                 | 65          |      |
| 40   | 20              | 54 | 45 | 21         | 55 | 9819783              | 5888        | 20   |
|      |                 | 1  | 48 |            | 1  | 1959                 | 64          |      |
| 50   | 20              | 56 | 33 | 21         | 56 | 9821742              | 5824        | 10   |
|      |                 | 1  | 47 |            | 2  | 1951                 | 64          |      |
| 2    | 20              | 58 | 20 | 21         | 58 | 9823693              | 5760        | 28   |
|      |                 | 1  | 46 |            | 1  | 1942                 | 64          |      |
| 10   | 21              | 0  | 6  | 21         | 59 | 9825635              | 5696        | 50   |
|      |                 | 1  | 46 |            | 2  | 1934                 | 64          |      |
| 20   | 21              | 1  | 52 | 22         | 1  | 9827569              | 5632        | 40   |
|      |                 | 1  | 45 |            | 1  | 1926                 | 63          |      |
| 30   | 21              | 3  | 37 | 22         | 2  | 9829495              | 5569        | 30   |
|      |                 | 1  | 44 |            | 2  | 1918                 | 63          |      |
| 40   | 21              | 5  | 21 | 22         | 4  | 9831413              | 5506        | 20   |
|      |                 | 1  | 44 |            | 1  | 1910                 | 63          |      |
| 50   | 21              | 7  | 5  | 22         | 5  | 9833323              | 5443        | 10   |
|      |                 | 1  | 43 |            | 2  | 1901                 | 63          |      |
| 3    | 21              | 8  | 48 | 22         | 7  | 9835224              | 5380        | 27   |
|      |                 | 1  | 42 |            | 1  | 1893                 | 62          |      |
| b    |                 |    |    | c          |    |                      |             |      |



# NOCTIALIS AB ECLIPTICA. 12

II

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| Gr.      | Arcus cum<br>differentia |          |    | Dra<br>Ad. |          | Numerus<br>multipli. | Dra<br>Sub. |    | Gr.       |
|----------|--------------------------|----------|----|------------|----------|----------------------|-------------|----|-----------|
| scr.     | par                      | /        | // | /          | //       |                      |             |    | scr.      |
| <b>3</b> | 21                       | 8        | 48 | 22         | 7        | 9835224              | 5380        |    | <b>27</b> |
| 10       | 21                       | 10       | 30 | 22         | 8        | 9837117              | 5318        | 50 |           |
|          |                          | 1        | 42 |            | 2        | 1885                 | 62          |    |           |
| 20       | 21                       | 12       | 12 | 22         | 10       | 9839002              | 5256        | 40 |           |
|          |                          | 1        | 41 |            | 1        | 1876                 | 62          |    |           |
| 30       | 21                       | 13       | 53 | 22         | 11       | 9840878              | 5194        | 30 |           |
|          |                          | 1        | 41 |            | 2        | 1867                 | 61          |    |           |
| 40       | 21                       | 15       | 34 | 22         | 13       | 9842745              | 5133        | 20 |           |
|          |                          | 1        | 40 |            | 1        | 1859                 | 61          |    |           |
| 50       | 21                       | 17       | 14 | 22         | 14       | 9844604              | 5072        | 10 |           |
|          |                          | 1        | 40 |            | 2        | 1850                 | 61          |    |           |
| <b>4</b> | 21                       | 18       | 54 | 22         | 16       | 9846454              | 5011        |    | <b>26</b> |
|          |                          | 1        | 39 |            | 1        | 1841                 | 61          |    |           |
| 10       | 21                       | 20       | 33 | 22         | 17       | 9848295              | 4950        | 50 |           |
|          |                          | 1        | 38 |            | 2        | 1833                 | 60          |    |           |
| 20       | 21                       | 22       | 11 | 22         | 19       | 9850128              | 4890        | 40 |           |
|          |                          | 1        | 37 |            | 1        | 1824                 | 60          |    |           |
| 30       | 21                       | 23       | 48 | 22         | 20       | 9851952              | 4830        | 30 |           |
|          |                          | 1        | 37 |            | 1        | 1815                 | 60          |    |           |
| 40       | 21                       | 25       | 25 | 22         | 21       | 9853767              | 4770        | 20 |           |
|          |                          | 1        | 36 |            | 2        | 1806                 | 59          |    |           |
| 50       | 21                       | 27       | 1  | 22         | 23       | 9855573              | 4711        | 10 |           |
|          |                          | 1        | 36 |            | 1        | 1797                 | 59          |    |           |
| <b>5</b> | 21                       | 28       | 37 | 22         | 24       | 9857370              | 4652        |    | <b>25</b> |
|          |                          | 1        | 35 |            | 1        | 1788                 | 59          |    |           |
| 10       | 21                       | 30       | 12 | 22         | 25       | 9859158              | 4593        | 50 |           |
|          |                          | 1        | 34 |            | 2        | 1779                 | 58          |    |           |
| 20       | 21                       | 31       | 46 | 22         | 27       | 9860937              | 4535        | 40 |           |
|          |                          | 1        | 34 |            | 1        | 1769                 | 58          |    |           |
| 30       | 21                       | 33       | 20 | 22         | 28       | 9862706              | 4477        | 30 |           |
|          |                          | 1        | 33 |            | 1        | 1760                 | 58          |    |           |
| 40       | 21                       | 34       | 53 | 22         | 29       | 9864466              | 4419        | 20 |           |
|          |                          | 1        | 33 |            | 2        | 1751                 | 58          |    |           |
| 50       | 21                       | 36       | 26 | 22         | 31       | 9866217              | 4361        | 10 |           |
|          |                          | 1        | 32 |            | 1        | 1742                 | 57          |    |           |
| <b>6</b> | 21                       | 37       | 58 | 22         | 32       | 9867959              | 4304        |    | <b>24</b> |
|          |                          | 1        | 31 |            | 1        | 1733                 | 57          |    |           |
|          |                          | <b>h</b> |    |            | <b>g</b> |                      |             |    |           |



CANON DECLINATIONVM ÆQVIA

| II   |              |    |    | T  |         |         |                   |          |      |  |  |
|------|--------------|----|----|----|---------|---------|-------------------|----------|------|--|--|
| Gr.  | Arcus cū dŕa |    |    |    | Dŕa Ad. |         | Numerus multipli. | Dŕa Sub. | Gr.  |  |  |
| scr. | par.         | /  | // | /  | //      |         |                   |          | scr. |  |  |
| 6    | 21           | 37 | 58 | 22 | 32      | 9867959 | 4304              | 24       |      |  |  |
| 10   | 21           | 39 | 29 | 22 | 33      | 9869692 | 4247              | 50       |      |  |  |
|      |              | 1  | 30 |    | 2       | 1723    | 57                |          |      |  |  |
| 20   | 21           | 40 | 59 | 22 | 35      | 9871415 | 4190              | 40       |      |  |  |
|      |              | 1  | 30 |    | 1       | 1713    | 56                |          |      |  |  |
| 30   | 21           | 42 | 29 | 22 | 36      | 9873128 | 4134              | 30       |      |  |  |
|      |              | 1  | 29 |    | 1       | 1703    | 56                |          |      |  |  |
| 40   | 21           | 43 | 58 | 22 | 37      | 9874831 | 4078              | 20       |      |  |  |
|      |              | 1  | 29 |    | 1       | 1694    | 56                |          |      |  |  |
| 50   | 21           | 45 | 27 | 22 | 38      | 9876525 | 4022              | 10       |      |  |  |
|      |              | 1  | 29 |    | 1       | 1684    | 55                |          |      |  |  |
| 7    | 21           | 46 | 56 | 22 | 39      | 9878209 | 3967              | 23       |      |  |  |
|      |              | 1  | 28 |    | 1       | 1674    | 55                |          |      |  |  |
| 10   | 21           | 48 | 24 | 22 | 40      | 9879883 | 3912              | 50       |      |  |  |
|      |              | 1  | 27 |    | 2       | 1665    | 55                |          |      |  |  |
| 20   | 21           | 49 | 51 | 22 | 42      | 9881548 | 3857              | 40       |      |  |  |
|      |              | 1  | 26 |    | 1       | 1655    | 54                |          |      |  |  |
| 30   | 21           | 51 | 17 | 22 | 43      | 9883203 | 3803              | 30       |      |  |  |
|      |              | 1  | 25 |    | 1       | 1647    | 54                |          |      |  |  |
| 40   | 21           | 52 | 42 | 22 | 44      | 9884848 | 3749              | 20       |      |  |  |
|      |              | 1  | 25 |    | 1       | 1636    | 53                |          |      |  |  |
| 50   | 21           | 54 | 7  | 22 | 45      | 9886484 | 3696              | 10       |      |  |  |
|      |              | 1  | 24 |    | 1       | 1626    | 53                |          |      |  |  |
| 8    | 21           | 55 | 31 | 22 | 46      | 9888110 | 3643              | 22       |      |  |  |
|      |              | 1  | 23 |    | 1       | 1615    | 53                |          |      |  |  |
| 10   | 21           | 56 | 54 | 22 | 47      | 9889725 | 3590              | 50       |      |  |  |
|      |              | 1  | 23 |    | 2       | 1605    | 52                |          |      |  |  |
| 20   | 21           | 58 | 17 | 22 | 49      | 9891330 | 3538              | 40       |      |  |  |
|      |              | 1  | 22 |    | 1       | 1595    | 52                |          |      |  |  |
| 30   | 21           | 59 | 39 | 22 | 50      | 9892925 | 3486              | 30       |      |  |  |
|      |              | 1  | 22 |    | 1       | 1585    | 52                |          |      |  |  |
| 40   | 22           | 1  | 1  | 22 | 51      | 9894510 | 3434              | 20       |      |  |  |
|      |              | 1  | 21 |    | 1       | 1575    | 51                |          |      |  |  |
| 50   | 22           | 2  | 22 | 22 | 52      | 9896085 | 3383              | 10       |      |  |  |
|      |              | 1  | 21 |    | 1       | 1564    | 51                |          |      |  |  |
| 9    | 22           | 3  | 43 | 22 | 53      | 9897649 | 3332              | 21       |      |  |  |
|      |              | 1  | 20 |    | 1       | 1554    | 51                |          |      |  |  |
|      |              | b  |    | g  |         |         |                   |          |      |  |  |



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| Gr.  | Arcus cum<br>differentia. |    |    |    | Dra<br>Ad. |                 | Numerus<br>multipli. | Dra<br>Sub. | Gr. |
|------|---------------------------|----|----|----|------------|-----------------|----------------------|-------------|-----|
| scr. | par                       | /  | // | /  | //         | scr.            |                      |             |     |
| 9    | 22                        | 3  | 43 | 22 | 53         | 9897649         | 3332                 | 21          |     |
| 10   | 22                        | 5  | 3  | 22 | 54         | 9899203<br>1544 | 3281<br>50           | 50          |     |
| 20   | 22                        | 6  | 22 | 22 | 55         | 9900747<br>1534 | 3231<br>50           | 40          |     |
| 30   | 22                        | 7  | 41 | 22 | 56         | 9902281<br>1523 | 3181<br>50           | 30          |     |
| 40   | 22                        | 8  | 59 | 22 | 57         | 9903804<br>1512 | 3131<br>49           | 20          |     |
| 50   | 22                        | 10 | 16 | 22 | 58         | 9905316<br>1502 | 3082<br>49           | 10          |     |
| 10   | 22                        | 11 | 33 | 22 | 59         | 9906818<br>1491 | 3033<br>49           | 20          |     |
| 10   | 22                        | 12 | 49 | 23 | 0          | 9908309<br>1480 | 2984<br>48           | 50          |     |
| 20   | 22                        | 14 | 4  | 23 | 1          | 9909789<br>1470 | 2936<br>48           | 40          |     |
| 30   | 22                        | 15 | 19 | 23 | 2          | 9911259<br>1459 | 2888<br>4            | 30          |     |
| 40   | 22                        | 16 | 33 | 23 | 3          | 9912718<br>1448 | 2840<br>47           | 20          |     |
| 50   | 22                        | 17 | 47 | 23 | 4          | 9914166<br>1437 | 2793<br>47           | 10          |     |
| 11   | 22                        | 19 | 0  | 23 | 5          | 9915603<br>1426 | 2746<br>47           | 19          |     |
| 10   | 22                        | 20 | 12 | 23 | 6          | 9917029<br>1416 | 2699<br>46           | 50          |     |
| 20   | 22                        | 21 | 24 | 23 | 7          | 9918445<br>1405 | 2653<br>46           | 40          |     |
| 30   | 22                        | 22 | 35 | 23 | 8          | 9919850<br>1393 | 2607<br>46           | 30          |     |
| 40   | 22                        | 23 | 45 | 23 | 9          | 9921243<br>1382 | 2561<br>45           | 20          |     |
| 50   | 22                        | 24 | 55 | 23 | 10         | 9922625<br>1372 | 2516<br>45           | 10          |     |
| 12   | 22                        | 26 | 4  | 23 | 11         | 9923997<br>1361 | 2471<br>44           | 18          |     |
| b 5  |                           |    |    |    |            |                 |                      |             |     |

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| II   |                          |    |    | I          |    | Numerus<br>multipli. | Dra<br>Sub. | Gr.  |
|------|--------------------------|----|----|------------|----|----------------------|-------------|------|
| Gr.  | Arcus cum<br>differentia |    |    | Dra<br>Ad. |    |                      |             |      |
| scr. | par                      | /  | // | /          | // |                      |             | scr. |
| I2   | 22                       | 26 | 4  | 23         | 11 | 9923997              | 2471        | 18   |
| 10   | 22                       | 27 | 12 | 23         | 12 | 9925358              | 2427        | 50   |
|      |                          | 1  | 8  |            | 1  | 1350                 | 44          |      |
| 20   | 22                       | 28 | 20 | 23         | 13 | 9926708              | 2383        | 40   |
|      |                          | 1  | 7  |            | 0  | 1338                 | 44          |      |
| 30   | 22                       | 29 | 27 | 23         | 13 | 9928046              | 2339        | 30   |
|      |                          | 1  | 7  |            | 1  | 1327                 | 43          |      |
| 40   | 22                       | 30 | 34 | 33         | 14 | 9929373              | 2296        | 20   |
|      |                          | 1  | 6  |            | 1  | 1316                 | 43          |      |
| 50   | 22                       | 31 | 40 | 23         | 15 | 9930689              | 2253        | 10   |
|      |                          | 1  | 5  |            | 1  | 1304                 | 43          |      |
| I3   | 22                       | 32 | 45 | 23         | 16 | 9931993              | 2210        | 17   |
|      |                          | 1  | 5  |            | 1  | 1293                 | 42          |      |
| 10   | 22                       | 33 | 50 | 23         | 17 | 9933286              | 2168        | 50   |
|      |                          | 1  | 4  |            | 1  | 1281                 | 42          |      |
| 20   | 22                       | 34 | 54 | 23         | 18 | 9934567              | 2126        | 40   |
|      |                          | 1  | 3  |            | 0  | 1270                 | 42          |      |
| 30   | 22                       | 35 | 57 | 23         | 18 | 9935837              | 2084        | 30   |
|      |                          | 1  | 3  |            | 1  | 1258                 | 41          |      |
| 40   | 22                       | 37 | 0  | 23         | 19 | 9937095              | 2043        | 20   |
|      |                          | 1  | 2  |            | 1  | 1247                 | 41          |      |
| 50   | 22                       | 38 | 2  | 23         | 20 | 9938342              | 2002        | 10   |
|      |                          | 1  | 1  |            | 1  | 1235                 | 40          |      |
| I4   | 22                       | 39 | 3  | 23         | 21 | 9939577              | 1962        | 16   |
|      |                          | 1  | 1  |            | 1  | 1224                 | 40          |      |
| 10   | 22                       | 40 | 4  | 23         | 22 | 9940801              | 1922        | 50   |
|      |                          | 1  | 0  |            | 1  | 1212                 | 40          |      |
| 20   | 22                       | 41 | 4  | 23         | 23 | 9942013              | 1882        | 40   |
|      |                          | 0  | 59 |            | 0  | 1201                 | 39          |      |
| 30   | 22                       | 42 | 3  | 23         | 23 | 9943214              | 1843        | 30   |
|      |                          | 0  | 59 |            | 1  | 1189                 | 39          |      |
| 40   | 22                       | 43 | 2  | 23         | 24 | 9944403              | 1804        | 20   |
|      |                          | 0  | 59 |            | 1  | 1177                 | 38          |      |
| 50   | 22                       | 44 | 1  | 23         | 25 | 9945580              | 1766        | 10   |
|      |                          | 0  | 58 |            | 1  | 1166                 | 38          |      |
| I5   | 22                       | 44 | 59 | 23         | 26 | 9946746              | 1728        | 15   |
|      |                          | 0  | 57 |            | 0  | 1154                 | 38          |      |



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| Gr.  | Arcus cum<br>differentia. |    |    | Dra<br>Ad. |    | Numerus<br>multipli. | Dra<br>Sub. |  | Gr.  |
|------|---------------------------|----|----|------------|----|----------------------|-------------|--|------|
| scr. | par                       | /  | // | /          | // |                      |             |  | scr. |
| 15   | 22                        | 44 | 59 | 23         | 26 | 9946746              | 1728        |  | 15   |
| 10   | 22                        | 45 | 56 | 23         | 26 | 9947900              | 1690        |  | 50   |
|      |                           | 0  | 56 |            | 1  | 1142                 | 37          |  |      |
| 20   | 22                        | 46 | 52 | 23         | 27 | 9949042              | 1653        |  | 40   |
|      |                           | 0  | 56 |            | 1  | 1130                 | 37          |  |      |
| 30   | 22                        | 47 | 48 | 23         | 28 | 9950172              | 1616        |  | 30   |
|      |                           | 0  | 55 |            | 1  | 1118                 | 36          |  |      |
| 40   | 22                        | 48 | 43 | 23         | 29 | 9951290              | 1580        |  | 20   |
|      |                           | 0  | 54 |            | 1  | 1105                 | 36          |  |      |
| 50   | 22                        | 49 | 37 | 23         | 30 | 9952395              | 1544        |  | 10   |
|      |                           | 0  | 54 |            | 1  | 1093                 | 35          |  |      |
| 16   | 22                        | 50 | 31 | 23         | 31 | 9953488              | 1508        |  | 14   |
|      |                           | 0  | 53 |            | 0  | 1082                 | 34          |  |      |
| 10   | 22                        | 51 | 24 | 23         | 31 | 9954570              | 1475        |  | 50   |
|      |                           | 0  | 53 |            | 1  | 1070                 | 35          |  |      |
| 20   | 22                        | 52 | 17 | 23         | 32 | 9955640              | 1440        |  | 40   |
|      |                           | 0  | 52 |            | 1  | 1058                 | 35          |  |      |
| 30   | 22                        | 53 | 9  | 23         | 33 | 9956698              | 1405        |  | 30   |
|      |                           | 0  | 51 |            | 1  | 1046                 | 34          |  |      |
| 40   | 22                        | 54 | 0  | 23         | 34 | 9957744              | 1371        |  | 20   |
|      |                           | 0  | 51 |            | 0  | 1033                 | 34          |  |      |
| 50   | 22                        | 54 | 51 | 23         | 34 | 9958777              | 1337        |  | 10   |
|      |                           | 0  | 50 |            | 1  | 1021                 | 33          |  |      |
| 17   | 22                        | 55 | 41 | 23         | 35 | 9959798              | 1304        |  | 13   |
|      |                           | 0  | 49 |            | 0  | 1009                 | 33          |  |      |
| 10   | 22                        | 56 | 30 | 23         | 35 | 9960807              | 1271        |  | 50   |
|      |                           | 0  | 48 |            | 1  | 997                  | 32          |  |      |
| 20   | 22                        | 57 | 18 | 23         | 36 | 9961804              | 1239        |  | 40   |
|      |                           | 0  | 48 |            | 0  | 985                  | 32          |  |      |
| 30   | 22                        | 58 | 6  | 23         | 36 | 9962789              | 1207        |  | 30   |
|      |                           | 0  | 48 |            | 1  | 972                  | 32          |  |      |
| 40   | 22                        | 58 | 54 | 23         | 37 | 9963761              | 1175        |  | 20   |
|      |                           | 0  | 47 |            | 1  | 959                  | 31          |  |      |
| 50   | 22                        | 59 | 41 | 23         | 38 | 9964720              | 1144        |  | 10   |
|      |                           | 0  | 47 |            | 0  | 947                  | 31          |  |      |
| 18   | 23                        | 0  | 28 | 23         | 38 | 9965667              | 1113        |  | 12   |
|      |                           | 0  | 46 |            | 1  | 935                  | 30          |  |      |

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# CANON DECLINATIONIS EQV 19

| II   |                          |    |    | †          |    |                      |             |      |  |
|------|--------------------------|----|----|------------|----|----------------------|-------------|------|--|
| Gr.  | Arcus cum<br>differentia |    |    | Dra<br>Ad. |    | Numerus<br>multipli. | Dra<br>Sub. | Gr.  |  |
| scr. | par                      | /  | // | /          | // |                      |             | scr. |  |
| 18   | 23                       | 0  | 28 | 23         | 38 | 9965667              | 1113        | 12   |  |
| 10   | 23                       | 1  | 14 | 23         | 39 | 9966602              | 1083        | 50   |  |
|      |                          | 0  | 45 |            | 0  | 923                  | 30          |      |  |
| 20   | 23                       | 1  | 59 | 23         | 39 | 9967525              | 1053        | 40   |  |
|      |                          | 0  | 44 |            | 1  | 910                  | 30          |      |  |
| 30   | 23                       | 2  | 43 | 23         | 40 | 9968435              | 1023        | 30   |  |
|      |                          | 0  | 43 |            | 1  | 898                  | 29          |      |  |
| 40   | 23                       | 3  | 26 | 23         | 41 | 9969333              | 994         | 20   |  |
|      |                          | 0  | 43 |            | 0  | 886                  | 29          |      |  |
| 50   | 23                       | 4  | 9  | 23         | 41 | 9970219              | 965         | 10   |  |
|      |                          | 0  | 43 |            | 1  | 873                  | 28          |      |  |
| 19   | 23                       | 4  | 52 | 23         | 42 | 9971092              | 937         | 11   |  |
|      |                          | 0  | 42 |            | 0  | 860                  | 28          |      |  |
| 10   | 23                       | 5  | 34 | 23         | 42 | 9971952              | 909         | 50   |  |
|      |                          | 0  | 41 |            | 1  | 847                  | 28          |      |  |
| 20   | 23                       | 6  | 15 | 23         | 43 | 9972799              | 881         | 40   |  |
|      |                          | 0  | 41 |            | 1  | 835                  | 27          |      |  |
| 30   | 23                       | 6  | 56 | 23         | 44 | 9973634              | 854         | 30   |  |
|      |                          | 0  | 40 |            | 0  | 821                  | 27          |      |  |
| 40   | 23                       | 7  | 36 | 23         | 44 | 9974456              | 827         | 20   |  |
|      |                          | 0  | 39 |            | 1  | 810                  | 26          |      |  |
| 50   | 23                       | 8  | 15 | 23         | 45 | 9975266              | 801         | 10   |  |
|      |                          | 0  | 38 |            | 0  | 797                  | 26          |      |  |
| 20   | 23                       | 8  | 53 | 23         | 45 | 9976063              | 775         | 10   |  |
|      |                          | 0  | 38 |            | 1  | 784                  | 25          |      |  |
| 10   | 23                       | 9  | 31 | 23         | 46 | 9976847              | 750         | 50   |  |
|      |                          | 0  | 37 |            | 0  | 772                  | 25          |      |  |
| 20   | 23                       | 10 | 8  | 23         | 46 | 9977619              | 725         | 40   |  |
|      |                          | 0  | 36 |            | 1  | 759                  | 24          |      |  |
| 30   | 23                       | 10 | 44 | 23         | 47 | 9978378              | 701         | 30   |  |
|      |                          | 0  | 36 |            | 0  | 746                  | 24          |      |  |
| 40   | 23                       | 11 | 20 | 23         | 47 | 9979124              | 677         | 20   |  |
|      |                          | 0  | 36 |            | 1  | 733                  | 24          |      |  |
| 50   | 23                       | 11 | 56 | 23         | 48 | 9979857              | 653         | 10   |  |
|      |                          | 0  | 35 |            | 0  | 721                  | 23          |      |  |
| 21   | 23                       | 12 | 31 | 23         | 48 | 9980578              | 630         | 9    |  |
|      |                          | 0  | 34 |            | 1  | 708                  | 23          |      |  |
| b    |                          |    |    | c          |    |                      |             |      |  |



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| II   |                          |    |    | T          |    |                      |             |  |      |
|------|--------------------------|----|----|------------|----|----------------------|-------------|--|------|
| Gr.  | Arcus cum<br>differentia |    |    | Dra<br>Ad. |    | Numerus<br>multipli. | Dra<br>Sub. |  | Gr.  |
| scr. | par                      | /  | // | /          | // |                      |             |  | scr. |
| 21   | 23                       | 12 | 31 | 23         | 48 | 9980578              | 630         |  | 9    |
| 10   | 23                       | 13 | 5  | 23         | 49 | 9981286              | 607         |  | 50   |
|      |                          | 0  | 34 |            | 0  | 695                  | 22          |  |      |
| 20   | 23                       | 13 | 39 | 23         | 49 | 9981981              | 585         |  | 40   |
|      |                          | 0  | 33 |            | 1  | 682                  | 22          |  |      |
| 30   | 23                       | 14 | 12 | 23         | 50 | 9982663              | 563         |  | 30   |
|      |                          | 0  | 32 |            | 0  | 669                  | 22          |  |      |
| 40   | 23                       | 14 | 44 | 23         | 50 | 9983332              | 541         |  | 20   |
|      |                          | 0  | 31 |            | 1  | 656                  | 21          |  |      |
| 50   | 23                       | 15 | 15 | 23         | 51 | 9983988              | 520         |  | 10   |
|      |                          | 0  | 31 |            | 0  | 643                  | 21          |  |      |
| 22   | 23                       | 15 | 46 | 23         | 51 | 9984631              | 499         |  | 8    |
|      |                          | 0  | 30 |            | 0  | 630                  | 20          |  |      |
| 10   | 23                       | 16 | 16 | 23         | 51 | 9985261              | 479         |  | 50   |
|      |                          | 0  | 29 |            | 1  | 617                  | 20          |  |      |
| 20   | 23                       | 16 | 45 | 23         | 52 | 9985878              | 459         |  | 40   |
|      |                          | 0  | 29 |            | 0  | 604                  | 20          |  |      |
| 30   | 23                       | 17 | 14 | 23         | 52 | 9986482              | 439         |  | 30   |
|      |                          | 0  | 29 |            | 0  | 592                  | 19          |  |      |
| 40   | 23                       | 17 | 43 | 23         | 52 | 9987074              | 420         |  | 20   |
|      |                          | 0  | 28 |            | 1  | 578                  | 19          |  |      |
| 50   | 23                       | 18 | 11 | 23         | 53 | 9987652              | 401         |  | 10   |
|      |                          | 0  | 27 |            | 0  | 565                  | 18          |  |      |
| 23   | 23                       | 18 | 38 | 23         | 53 | 9988217              | 383         |  | 7    |
|      |                          | 0  | 26 |            | 0  | 552                  | 18          |  |      |
| 10   | 23                       | 19 | 4  | 23         | 53 | 9988769              | 365         |  | 50   |
|      |                          | 0  | 26 |            | 1  | 539                  | 17          |  |      |
| 20   | 23                       | 19 | 30 | 23         | 54 | 9989308              | 348         |  | 40   |
|      |                          | 0  | 25 |            | 0  | 526                  | 17          |  |      |
| 30   | 23                       | 19 | 55 | 23         | 54 | 9989834              | 331         |  | 30   |
|      |                          | 0  | 25 |            | 0  | 513                  | 17          |  |      |
| 40   | 23                       | 20 | 20 | 23         | 54 | 9990347              | 314         |  | 20   |
|      |                          | 0  | 24 |            | 1  | 500                  | 16          |  |      |
| 50   | 23                       | 20 | 44 | 23         | 55 | 9990847              | 298         |  | 10   |
|      |                          | 0  | 23 |            | 0  | 486                  | 16          |  |      |
| 24   | 23                       | 21 | 7  | 23         | 55 | 9991333              | 282         |  | 6    |
|      |                          | 0  | 22 |            | 0  | 473                  | 15          |  |      |

b

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CANON<sup>us</sup> DECLINATIONVM EQVIB

| II   |              |    |    | †       |    |                   |  |          |    |
|------|--------------|----|----|---------|----|-------------------|--|----------|----|
| Gr.  | Arcus cū dñā |    |    | Dñā Ad. |    | Numerus multipli. |  | Dñā Sub. |    |
| scr. | par.         | /  | // | /       | // |                   |  |          |    |
| 24   | 23           | 21 | 7  | 23      | 55 | 9991333           |  | 282      | 6  |
| 10   | 23           | 21 | 29 | 23      | 55 | 9991806           |  | 267      | 50 |
|      |              | 0  | 22 |         | 0  | 460               |  | 15       |    |
| 20   | 23           | 21 | 51 | 23      | 55 | 9992266           |  | 252      | 40 |
|      |              | 0  | 21 |         | 1  | 447               |  | 15       |    |
| 30   | 23           | 22 | 12 | 23      | 56 | 9992713           |  | 237      | 30 |
|      |              | 0  | 21 |         | 0  | 434               |  | 14       |    |
| 40   | 23           | 22 | 33 | 23      | 56 | 9993147           |  | 223      | 20 |
|      |              | 0  | 20 |         | 0  | 421               |  | 14       |    |
| 50   | 23           | 22 | 53 | 23      | 56 | 9993568           |  | 209      | 10 |
|      |              | 0  | 20 |         | 0  | 407               |  | 13       |    |
| 25   | 23           | 23 | 13 | 23      | 56 | 9993975           |  | 196      | 5  |
|      |              | 0  | 19 |         | 0  | 394               |  | 13       |    |
| 10   | 23           | 23 | 32 | 23      | 56 | 9994369           |  | 183      | 50 |
|      |              | 0  | 18 |         | 1  | 381               |  | 12       |    |
| 20   | 23           | 23 | 50 | 23      | 57 | 9994750           |  | 171      | 40 |
|      |              | 0  | 18 |         | 0  | 368               |  | 12       |    |
| 30   | 23           | 24 | 8  | 23      | 57 | 9995118           |  | 159      | 30 |
|      |              | 0  | 17 |         | 0  | 354               |  | 12       |    |
| 40   | 23           | 24 | 25 | 23      | 57 | 9995472           |  | 147      | 20 |
|      |              | 0  | 16 |         | 0  | 341               |  | 11       |    |
| 50   | 23           | 24 | 41 | 23      | 57 | 9995813           |  | 136      | 10 |
|      |              | 0  | 15 |         | 1  | 328               |  | 11       |    |
| 26   | 23           | 24 | 56 | 23      | 58 | 9996141           |  | 125      | 4  |
|      |              | 0  | 15 |         | 0  | 314               |  | 10       |    |
| 10   | 23           | 25 | 11 | 23      | 58 | 9996455           |  | 115      | 50 |
|      |              | 0  | 14 |         | 0  | 301               |  | 10       |    |
| 20   | 23           | 25 | 25 | 23      | 58 | 9996756           |  | 105      | 40 |
|      |              | 0  | 14 |         | 0  | 288               |  | 9        |    |
| 30   | 23           | 25 | 39 | 23      | 58 | 9997044           |  | 96       | 30 |
|      |              | 0  | 13 |         | 0  | 274               |  | 9        |    |
| 40   | 23           | 25 | 52 | 23      | 58 | 9997318           |  | 87       | 20 |
|      |              | 0  | 13 |         | 1  | 261               |  | 9        |    |
| 50   | 23           | 26 | 5  | 23      | 59 | 9997579           |  | 78       | 10 |
|      |              | 0  | 12 |         | 0  | 248               |  | 8        |    |
| 27   | 23           | 26 | 17 | 23      | 59 | 9997827           |  | 70       | 3  |
|      |              | 0  | 11 |         | 0  | 233               |  | 8        |    |



| II   |                          |         |          | I          |         |                      |             |      |  |
|------|--------------------------|---------|----------|------------|---------|----------------------|-------------|------|--|
| Gr.  | Arcus cum<br>differentia |         |          | Dra<br>Ad. |         | Numerus<br>multipli. | Dra<br>Sub. | Gr.  |  |
| scr. | par                      | I       | II       | I          | II      |                      |             | scr. |  |
| 27   | 23                       | 26      | 17       | 23         | 59      | 9997827              | 70          | 3    |  |
| 10   | 23                       | 26<br>0 | 28<br>11 | 23         | 59<br>0 | 9998060<br>221       | 62<br>7     | 50   |  |
| 20   | 23                       | 26<br>0 | 39<br>10 | 23         | 59<br>0 | 9998281<br>208       | 55<br>7     | 40   |  |
| 30   | 23                       | 26<br>0 | 49<br>9  | 23         | 59<br>0 | 9998489<br>195       | 48<br>6     | 30   |  |
| 40   | 23                       | 26<br>0 | 58<br>8  | 23         | 59<br>0 | 9998684<br>181       | 42<br>6     | 20   |  |
| 50   | 23                       | 27<br>0 | 6<br>8   | 23         | 59<br>0 | 9998865<br>168       | 36<br>5     | 10   |  |
| 28   | 23                       | 27<br>0 | 14<br>7  | 23         | 59<br>0 | 9999033<br>154       | 31<br>5     | 2    |  |
| 10   | 23                       | 27<br>0 | 21<br>7  | 23         | 59<br>0 | 9999187<br>141       | 26<br>4     | 50   |  |
| 20   | 23                       | 27<br>0 | 28<br>6  | 24         | 0<br>0  | 9999328<br>128       | 22<br>4     | 40   |  |
| 30   | 23                       | 27<br>0 | 34<br>5  | 24         | 0<br>0  | 9999456<br>114       | 18<br>4     | 30   |  |
| 40   | 23                       | 27<br>0 | 39<br>5  | 24         | 0<br>0  | 9999570<br>101       | 14<br>3     | 20   |  |
| 50   | 23                       | 27<br>0 | 44<br>4  | 24         | 0<br>0  | 9999671<br>87        | 11<br>3     | 10   |  |
| 29   | 23                       | 27<br>0 | 48<br>3  | 24         | 0<br>0  | 9999758<br>74        | 8<br>2      | I    |  |
| 10   | 23                       | 27<br>0 | 51<br>3  | 24         | 0<br>0  | 9999832<br>60        | 6<br>2      | 50   |  |
| 20   | 23                       | 27<br>0 | 54<br>2  | 24         | 0<br>0  | 9999892<br>47        | 4<br>1      | 40   |  |
| 30   | 23                       | 27<br>0 | 56<br>2  | 24         | 0<br>0  | 9999939<br>34        | 3<br>1      | 30   |  |
| 40   | 23                       | 27<br>0 | 58<br>1  | 24         | 0<br>0  | 9999973<br>20        | 2<br>1      | 20   |  |
| 50   | 23                       | 27<br>0 | 59<br>1  | 24         | 0<br>0  | 9999993<br>7         | 1<br>0      | 10   |  |
| 30   | 23                       | 28<br>0 | 0<br>0   | 24         | 0<br>0  | 10000000<br>0        | 0           | 0    |  |
|      |                          | b       |          | 6          |         |                      |             |      |  |







CANON FOE=  
CVNDVS AD SINGVLA  
scrupulâ totius quadrantis.

E



# C A N O N

|    | 0     |      | I      |      | 2      |      | 3      |      |    |
|----|-------|------|--------|------|--------|------|--------|------|----|
| 0  | 0000  |      | 174550 |      | 349207 |      | 524078 | 2917 | 60 |
| 1  | 2909  | 2909 | 177459 |      | 352120 |      | 526995 |      | 59 |
| 2  | 5818  |      | 180369 |      | 355033 |      | 529911 |      | 58 |
| 3  | 8727  |      | 183279 |      | 357945 |      | 532828 |      | 57 |
| 4  | 11636 |      | 186189 |      | 360858 |      | 535745 |      | 56 |
| 5  | 14544 |      | 189100 |      | 363770 |      | 538663 |      | 55 |
| 6  | 17452 |      | 192010 |      | 366683 |      | 541580 |      | 54 |
| 7  | 20361 |      | 194920 |      | 369596 |      | 544498 |      | 53 |
| 8  | 23270 |      | 197830 |      | 372508 |      | 547415 |      | 52 |
| 9  | 26179 |      | 200740 |      | 375428 |      | 550333 | 2918 | 51 |
| 10 | 29088 |      | 203650 |      | 378334 |      | 553251 |      | 50 |
| 11 | 31996 |      | 206561 |      | 381247 |      | 556169 |      | 49 |
| 12 | 34905 |      | 209471 |      | 384160 |      | 559087 |      | 48 |
| 13 | 37814 |      | 212381 | 2911 | 387073 |      | 562005 |      | 47 |
| 14 | 40723 |      | 215291 |      | 389987 |      | 564923 |      | 46 |
| 15 | 43632 |      | 218201 |      | 392900 |      | 567841 |      | 45 |
| 16 | 46541 |      | 221111 |      | 395814 |      | 570759 |      | 44 |
| 17 | 49450 |      | 224022 |      | 398727 | 2914 | 573678 |      | 43 |
| 18 | 52359 |      | 226932 |      | 401641 |      | 576596 |      | 42 |
| 19 | 55268 |      | 229842 |      | 404554 |      | 579514 | 2919 | 41 |
| 20 | 58177 |      | 232752 |      | 407468 |      | 582433 |      | 40 |
| 21 | 61086 |      | 235663 |      | 410382 |      | 585352 |      | 39 |
| 22 | 63995 |      | 238574 |      | 413295 |      | 588270 |      | 38 |
| 23 | 66904 |      | 241485 |      | 416209 |      | 591189 |      | 37 |
| 24 | 69813 |      | 244395 |      | 419123 |      | 594108 |      | 36 |
| 25 | 72722 |      | 247306 |      | 422037 |      | 597028 |      | 35 |
| 26 | 75631 |      | 250217 |      | 424951 |      | 599947 |      | 34 |
| 27 | 78540 |      | 253128 |      | 427866 |      | 602866 |      | 33 |
| 28 | 81450 |      | 256038 |      | 430780 |      | 605786 |      | 32 |
| 29 | 84359 |      | 258949 |      | 433694 |      | 608705 | 2920 | 31 |
| 30 | 87268 |      | 261859 |      | 436609 |      | 611625 |      | 30 |
|    | 89    |      | 88     |      | 87     |      | 86     |      |    |



|    | O      |      | I      |      | 2      |      | 3      |    |
|----|--------|------|--------|------|--------|------|--------|----|
| 30 | 87268  |      | 261859 |      | 436609 |      | 611625 | 30 |
| 31 | 90177  |      | 264770 |      | 439523 |      | 614544 | 39 |
| 32 | 93086  |      | 267681 |      | 442438 |      | 617464 | 28 |
| 33 | 95995  |      | 270592 |      | 445353 |      | 620384 | 27 |
| 34 | 98904  |      | 273503 |      | 448267 |      | 623304 | 26 |
| 35 | 101814 |      | 276414 |      | 451182 |      | 626225 | 25 |
| 36 | 104723 |      | 279325 |      | 454097 | 2915 | 629145 | 24 |
| 37 | 107632 |      | 282237 |      | 457012 |      | 632066 | 23 |
| 38 | 110541 |      | 285148 |      | 459927 |      | 634986 | 22 |
| 39 | 113450 | 2910 | 288059 | 2912 | 462842 |      | 637907 | 21 |
| 40 | 116360 |      | 290970 |      | 465757 |      | 640828 | 20 |
| 41 | 119269 |      | 293882 |      | 468672 |      | 643749 | 19 |
| 42 | 122178 |      | 296794 |      | 471588 |      | 646671 | 18 |
| 43 | 125088 |      | 299705 |      | 474503 |      | 649592 | 17 |
| 44 | 127997 |      | 302617 |      | 477419 |      | 652514 | 16 |
| 45 | 130906 |      | 305528 |      | 480335 |      | 655435 | 15 |
| 46 | 133816 |      | 308439 |      | 483251 |      | 658357 | 14 |
| 47 | 136725 |      | 311351 |      | 486166 |      | 661278 | 13 |
| 48 | 139635 |      | 314262 |      | 489082 |      | 664200 | 12 |
| 49 | 142544 |      | 317174 |      | 491997 | 2916 | 667121 | 11 |
| 50 | 145454 |      | 320085 |      | 494913 |      | 670043 | 10 |
| 51 | 148363 |      | 322997 |      | 497829 |      | 672965 | 9  |
| 52 | 151273 |      | 325909 |      | 500745 |      | 675888 | 8  |
| 53 | 154182 |      | 328821 |      | 503662 |      | 678810 | 7  |
| 54 | 159092 |      | 331733 |      | 506578 |      | 681733 | 6  |
| 55 | 160001 |      | 334645 |      | 509495 |      | 684656 | 5  |
| 56 | 162911 |      | 337558 |      | 512411 |      | 687578 | 4  |
| 57 | 165820 |      | 340470 |      | 515328 |      | 690501 | 3  |
| 58 | 168730 |      | 343382 |      | 518244 |      | 693423 | 2  |
| 59 | 171640 |      | 346295 | 2913 | 521161 |      | 696346 | 1  |
| 60 | 174550 |      | 349207 |      | 524078 |      | 699269 | 0  |
|    | 89     |      | 88     |      | 87     |      | 86     |    |



C A N O N

|    | 4      |      | 5      |      | 6       |      | 7       |    |
|----|--------|------|--------|------|---------|------|---------|----|
| 0  | 699269 |      | 874886 | 2931 | 1051042 |      | 1227846 | 60 |
| 1  | 702193 |      | 877817 |      | 1053983 |      | 1230798 | 59 |
| 2  | 705116 |      | 880748 |      | 1056924 |      | 1233751 | 58 |
| 3  | 708039 | 2924 | 883680 |      | 1059866 | 2942 | 1236704 | 57 |
| 4  | 710962 |      | 886611 |      | 1062808 |      | 1239658 | 56 |
| 5  | 713886 |      | 889543 | 2932 | 1065750 |      | 1242612 | 55 |
| 6  | 716809 |      | 892475 |      | 1068692 |      | 1245566 | 54 |
| 7  | 719733 |      | 895407 |      | 1071634 |      | 1248520 | 53 |
| 8  | 722657 |      | 898339 |      | 1074576 |      | 1251474 | 52 |
| 9  | 725580 |      | 901271 | 2933 | 1077518 | 2943 | 1254428 | 51 |
| 10 | 728504 |      | 904204 |      | 1080461 |      | 1257383 | 50 |
| 11 | 731428 |      | 907137 |      | 1083404 |      | 1260338 | 49 |
| 12 | 734353 |      | 910070 |      | 1086347 |      | 1263293 | 48 |
| 13 | 737277 | 2925 | 913003 |      | 1089291 |      | 1266249 | 47 |
| 14 | 740202 |      | 915936 |      | 1092234 |      | 1269205 | 46 |
| 15 | 743127 |      | 918870 | 2934 | 1095178 | 2944 | 1272161 | 45 |
| 16 | 746052 |      | 921804 |      | 1098122 |      | 1275117 | 44 |
| 17 | 748978 |      | 924738 |      | 1101066 |      | 1278073 | 43 |
| 18 | 751903 |      | 927771 |      | 1104010 |      | 1281029 | 42 |
| 19 | 754829 |      | 930605 |      | 1106954 | 2945 | 1283986 | 41 |
| 20 | 757754 |      | 933539 |      | 1109899 |      | 1286943 | 40 |
| 21 | 760680 | 2926 | 936473 | 2935 | 1112844 |      | 1289900 | 39 |
| 22 | 763606 |      | 939407 |      | 1115789 |      | 1292857 | 38 |
| 23 | 766532 |      | 942342 |      | 1118734 |      | 1295815 | 37 |
| 24 | 769459 |      | 945277 |      | 1121680 |      | 1298773 | 36 |
| 25 | 772385 |      | 948212 |      | 1124625 | 2946 | 1301731 | 35 |
| 26 | 775311 |      | 951147 | 2936 | 1127571 |      | 1304689 | 34 |
| 27 | 778238 |      | 954083 |      | 1130517 |      | 1307648 | 33 |
| 28 | 781164 |      | 957019 |      | 1133463 |      | 1310607 | 32 |
| 29 | 784091 |      | 959954 |      | 1136409 |      | 1313566 | 31 |
| 30 | 787017 |      | 962890 |      | 1139355 |      | 1316525 | 30 |
|    | 85     |      | 84     |      | 83      |      | 82      |    |



|    | 4      |      | 5       |      | 6       |      | 7       |      |
|----|--------|------|---------|------|---------|------|---------|------|
| 30 | 787017 | 2927 | 962890  |      | 1139355 | 2947 | 1316525 | 2960 |
| 31 | 789944 |      | 965826  |      | 1142302 |      | 1319485 | 29   |
| 32 | 792871 |      | 968763  |      | 1145249 |      | 1322445 | 28   |
| 33 | 795799 |      | 971699  |      | 1148196 |      | 1325405 | 27   |
| 34 | 798726 |      | 974636  | 2937 | 1151144 |      | 1328365 | 26   |
| 35 | 801653 |      | 977573  |      | 1154092 |      | 1331325 | 25   |
| 36 | 804581 |      | 980509  |      | 1157040 |      | 1334285 | 24   |
| 37 | 807509 |      | 983446  |      | 1159988 |      | 1337246 | 23   |
| 38 | 810437 | 2928 | 986383  |      | 1162936 | 2948 | 1340207 | 22   |
| 39 | 813365 |      | 989320  |      | 1165884 |      | 1343168 | 21   |
| 40 | 816293 |      | 992257  | 2938 | 1168832 |      | 1346129 | 20   |
| 41 | 819221 |      | 995195  |      | 1171781 | 2949 | 1349091 | 19   |
| 42 | 822150 |      | 998133  |      | 1174730 |      | 1352053 | 18   |
| 43 | 825079 |      | 1001072 |      | 1177679 |      | 1355015 | 17   |
| 44 | 828008 | 2929 | 1004010 |      | 1180628 |      | 1357977 | 16   |
| 45 | 830937 |      | 1006949 | 2939 | 1183577 | 2950 | 1360940 | 15   |
| 46 | 833866 |      | 1009887 |      | 1186527 |      | 1363903 | 14   |
| 47 | 836795 |      | 1012825 |      | 1189477 |      | 1366866 | 13   |
| 48 | 839724 |      | 1015763 |      | 1192427 |      | 1369830 | 12   |
| 49 | 842653 |      | 1018702 |      | 1195377 |      | 1372793 | 11   |
| 50 | 845583 |      | 1021641 |      | 1198328 | 2951 | 1375757 | 10   |
| 51 | 848513 |      | 1024580 |      | 1201279 |      | 1378721 | 9    |
| 52 | 851443 | 2930 | 1027519 | 2940 | 1204230 |      | 1381686 | 8    |
| 53 | 854374 |      | 1030459 |      | 1207181 |      | 1384650 | 7    |
| 54 | 857304 |      | 1033399 |      | 1210132 |      | 1387615 | 6    |
| 55 | 860234 |      | 1036339 |      | 1213084 |      | 1390580 | 5    |
| 56 | 863164 |      | 1039279 |      | 1216036 | 2952 | 1393545 | 4    |
| 57 | 866095 |      | 1042219 |      | 1218988 |      | 1396510 | 3    |
| 58 | 869025 |      | 1045160 | 2941 | 1221940 |      | 1399476 | 2    |
| 59 | 871956 |      | 1048101 |      | 1224892 |      | 1402442 | 1    |
| 60 | 874886 | 2931 | 1051042 |      | 1227845 | 2953 | 1405408 | 0    |
|    | 85     |      | 84      |      | 83      |      | 82      |      |



# C A N O N

|    | 8       |      | 9       |      | 10      |      | 11      |      |
|----|---------|------|---------|------|---------|------|---------|------|
| 0  | 1405408 |      | 1583844 | 2982 | 1763268 | 3000 | 1943803 | 3019 |
| 1  | 1408374 | 2967 | 1586826 |      | 1766268 |      | 1946822 |      |
| 2  | 1411341 |      | 1589808 |      | 1769268 |      | 1949841 |      |
| 3  | 1414308 |      | 1592791 | 2983 | 1772268 | 3001 | 1952861 | 3020 |
| 4  | 1417275 |      | 1595774 |      | 1775269 |      | 1955881 |      |
| 5  | 1420242 | 2968 | 1598757 |      | 1778270 |      | 1958901 |      |
| 6  | 1423210 |      | 1601740 |      | 1781271 |      | 1961922 | 3021 |
| 7  | 1426178 |      | 1604723 | 2984 | 1784272 | 3002 | 1964943 |      |
| 8  | 1429146 |      | 1607707 |      | 1787274 |      | 1967964 |      |
| 9  | 1432115 | 2969 | 1610691 |      | 1790276 |      | 1970985 |      |
| 10 | 1435084 |      | 1613675 | 2985 | 1793278 | 3003 | 1974007 | 3022 |
| 11 | 1438053 |      | 1616660 |      | 1796281 |      | 1977029 |      |
| 12 | 1441022 |      | 1619645 |      | 1799284 |      | 1980052 | 3023 |
| 13 | 1443992 | 2970 | 1622630 |      | 1802287 | 3004 | 1983075 |      |
| 14 | 1446961 |      | 1625615 | 2986 | 1805291 |      | 1986098 | 3024 |
| 15 | 1449931 |      | 1628601 |      | 1808295 |      | 1989122 |      |
| 16 | 1452901 |      | 1631587 |      | 1811299 |      | 1992146 | 3025 |
| 17 | 1455871 | 2971 | 1634573 |      | 1814303 | 3005 | 1995171 |      |
| 18 | 1458842 |      | 1637560 | 2987 | 1817308 |      | 1998196 | 3026 |
| 19 | 1461813 |      | 1640547 |      | 1820313 |      | 2001221 |      |
| 20 | 1464784 |      | 1643534 | 2988 | 1823318 | 3006 | 2004247 |      |
| 21 | 1467755 | 2972 | 1646522 |      | 1826324 |      | 2007273 |      |
| 22 | 1470727 |      | 1649510 |      | 1829329 |      | 2010299 | 3027 |
| 23 | 1473699 |      | 1652499 | 2989 | 1832335 | 3007 | 2013326 |      |
| 24 | 1476671 |      | 1655488 |      | 1835342 |      | 2016353 |      |
| 25 | 1479644 | 2973 | 1658477 |      | 1838349 | 3008 | 2019380 |      |
| 26 | 1482617 |      | 1661466 | 2990 | 1841357 |      | 2022408 | 3028 |
| 27 | 1485590 |      | 1664456 |      | 1844365 |      | 2025436 |      |
| 28 | 1488563 |      | 1667446 |      | 1847373 | 3009 | 2028464 |      |
| 29 | 1491536 | 2974 | 1670436 |      | 1850382 |      | 2031493 | 3029 |
| 30 | 1494510 |      | 1673426 |      | 1853391 |      | 2034522 |      |
|    | 81      |      | 80      |      | 79      |      | 78      |      |



| 8  |         | 9       |      | 10      |         | 11   |    |  |  |
|----|---------|---------|------|---------|---------|------|----|--|--|
| 30 | 1494510 | 1673426 | 2991 | 1853391 | 2034522 | 3030 | 30 |  |  |
| 31 | 1497484 | 1676417 |      | 1856400 | 2037552 |      | 29 |  |  |
| 32 | 1500458 | 1679408 |      | 1859409 | 2040582 |      | 28 |  |  |
| 33 | 1503433 | 1682399 |      | 1862419 | 2043612 |      | 27 |  |  |
| 34 | 1506408 | 1685390 |      | 1865429 | 2046643 | 3031 | 26 |  |  |
| 35 | 1509383 | 1688382 | 2992 | 1868439 | 2049674 |      | 25 |  |  |
| 36 | 1512358 | 1691374 |      | 1871449 | 2052705 |      | 24 |  |  |
| 37 | 1515334 | 1694366 |      | 1874460 | 2055737 | 3032 | 33 |  |  |
| 38 | 1518310 | 1697358 | 2993 | 1877471 | 2058769 |      | 22 |  |  |
| 39 | 1521286 | 1700351 |      | 1880482 | 2061801 |      | 21 |  |  |
| 40 | 1524262 | 1703344 |      | 1883494 | 2064834 | 3033 | 20 |  |  |
| 41 | 1527239 | 1706337 |      | 1886506 | 2067867 |      | 19 |  |  |
| 42 | 1530216 | 1709331 | 2994 | 1889518 | 2070900 |      | 18 |  |  |
| 43 | 1533193 | 1712325 |      | 1892531 | 2073934 | 3034 | 17 |  |  |
| 44 | 1536170 | 1715319 |      | 1895544 | 2076968 |      | 16 |  |  |
| 45 | 1539148 | 1718313 |      | 1898558 | 2080002 |      | 15 |  |  |
| 46 | 1542126 | 1721308 | 2995 | 1901572 | 2083037 | 3035 | 14 |  |  |
| 47 | 1545104 | 1724304 |      | 1904586 | 2086073 |      | 13 |  |  |
| 48 | 1548082 | 1727300 |      | 1907601 | 2089109 |      | 12 |  |  |
| 49 | 1551061 | 1730296 | 2996 | 1910616 | 2092145 | 3036 | 11 |  |  |
| 50 | 1554040 | 1733292 |      | 1913632 | 2095182 |      | 10 |  |  |
| 51 | 1557019 | 1736287 |      | 1916648 | 2098219 |      | 9  |  |  |
| 52 | 1559999 | 1739284 | 2997 | 1919664 | 2101256 | 3037 | 8  |  |  |
| 53 | 1562979 | 1742281 |      | 1922680 | 2104293 |      | 7  |  |  |
| 54 | 1565959 | 1745278 |      | 1925697 | 2107331 | 3038 | 6  |  |  |
| 55 | 1568339 | 1748275 |      | 1928714 | 2110369 |      | 5  |  |  |
| 56 | 1571920 | 1751273 | 2998 | 1931731 | 2113407 |      | 4  |  |  |
| 57 | 1574901 | 1754271 |      | 1934749 | 2116446 | 3039 | 3  |  |  |
| 58 | 1577882 | 1757270 | 2999 | 1937767 | 2119485 |      | 2  |  |  |
| 59 | 1580863 | 1760269 |      | 1940785 | 2122525 | 3040 | 1  |  |  |
| 60 | 1583844 | 1763268 |      | 1943803 | 2125565 |      | 0  |  |  |
| 81 |         | 80      |      | 79      |         | 78   |    |  |  |



# C A N O N

| 12 |         | 13   |         | 14   |         | 15   |         |
|----|---------|------|---------|------|---------|------|---------|
| 0  | 2125565 |      | 2308682 |      | 2493280 |      | 2679492 |
| 1  | 2128605 | 3041 | 2311746 |      | 2496370 | 3091 | 2682610 |
| 2  | 2131646 |      | 2314810 | 3065 | 2499411 |      | 2685728 |
| 3  | 2134687 | 3042 | 2317875 |      | 2502552 |      | 2688847 |
| 4  | 2137729 |      | 2320940 | 3066 | 2505643 | 3092 | 2691966 |
| 5  | 2140771 | 3043 | 2324006 |      | 2508735 |      | 2695086 |
| 6  | 2143814 |      | 2327072 | 3067 | 2511827 | 3093 | 2698206 |
| 7  | 2146857 |      | 2330139 |      | 2514920 |      | 2701327 |
| 8  | 2149900 |      | 2333206 |      | 2518013 |      | 2704448 |
| 9  | 2152944 | 3044 | 2336273 | 3068 | 2521106 | 3094 | 2707570 |
| 10 | 2155988 |      | 2339341 |      | 2524200 |      | 2710693 |
| 11 | 2159032 | 3045 | 2342419 | 3069 | 2527294 | 3095 | 2713816 |
| 12 | 2162077 |      | 2345478 |      | 2530389 |      | 2716940 |
| 13 | 2165122 |      | 2348547 |      | 2533484 | 3096 | 2720064 |
| 14 | 2168167 |      | 2351616 |      | 2536580 |      | 2723189 |
| 15 | 2171213 | 3046 | 2354686 | 3070 | 2539676 | 3097 | 2726314 |
| 16 | 2174259 |      | 2357757 | 3071 | 2542773 |      | 2729439 |
| 17 | 2177306 | 3047 | 2360828 |      | 2545870 | 3098 | 2732565 |
| 18 | 2180353 |      | 2363899 |      | 2548968 |      | 2735691 |
| 19 | 2183400 | 3048 | 2366971 | 3072 | 2552066 | 3099 | 2738818 |
| 20 | 2186448 |      | 2370043 |      | 2555165 |      | 2741945 |
| 21 | 2189496 |      | 2373116 | 3073 | 2558264 | 3100 | 2745073 |
| 22 | 2192544 |      | 2376189 |      | 2561364 |      | 2748201 |
| 23 | 2195593 | 3049 | 2379263 | 3074 | 2564464 |      | 2751330 |
| 24 | 2198642 |      | 2382337 |      | 2567564 | 3101 | 2754459 |
| 25 | 2201692 | 3050 | 2385411 |      | 2570665 |      | 2757589 |
| 26 | 2204742 |      | 2388486 | 3075 | 2573766 | 3102 | 2760729 |
| 27 | 2207792 | 3051 | 2391561 |      | 2576868 |      | 2763850 |
| 28 | 2210843 |      | 2394636 |      | 2579970 | 3103 | 2766981 |
| 29 | 2213894 | 3052 | 2397712 | 3076 | 2583073 |      | 2770113 |
| 30 | 2216946 |      | 2400788 |      | 2586176 |      | 2773245 |
| 77 |         | 76   |         | 75   |         | 74   |         |



| I2 |         | I3   |         | I4   |         | I5   |         |    |
|----|---------|------|---------|------|---------|------|---------|----|
| 30 | 2216946 |      | 2400788 | 3077 | 2586176 | 3104 | 2773245 | 30 |
| 31 | 2219998 | 3053 | 2403865 |      | 2589280 |      | 2776378 | 29 |
| 32 | 2223051 |      | 2406942 | 8    | 2592384 | 5    | 2779511 | 28 |
| 33 | 2226104 |      | 2410020 |      | 2595489 |      | 2782645 | 27 |
| 34 | 2229157 | 4    | 2413098 |      | 2598594 | 6    | 2785779 | 26 |
| 35 | 2232211 |      | 2416176 | 9    | 2601700 |      | 2788914 | 25 |
| 36 | 2235265 |      | 2419255 |      | 2604806 |      | 2792050 | 24 |
| 37 | 2238319 | 5    | 2422334 | 3080 | 2607912 | 7    | 2795186 | 23 |
| 38 | 2241374 |      | 2425414 |      | 2611019 |      | 2798323 | 22 |
| 39 | 2244429 | 6    | 2428494 |      | 2614126 | 8    | 2801460 | 21 |
| 40 | 2247485 |      | 2431574 | 1    | 2617234 |      | 2804597 | 20 |
| 41 | 2250541 |      | 2434655 |      | 2620342 | 9    | 2807735 | 19 |
| 42 | 2253597 | 7    | 2437736 | 2    | 2623451 |      | 2810873 | 18 |
| 43 | 2256654 |      | 2440818 |      | 2626560 | 3110 | 2814012 | 17 |
| 44 | 2259711 | 8    | 2443900 | 3    | 2629670 |      | 2817151 | 16 |
| 45 | 2262769 |      | 2446983 |      | 2632780 | 1    | 2820291 | 15 |
| 46 | 2265827 |      | 2450066 | 4    | 2635891 |      | 2823432 | 14 |
| 47 | 2268885 | 9    | 2453150 |      | 2639002 | 2    | 2826573 | 13 |
| 48 | 2271944 |      | 2456234 | 5    | 2642114 |      | 2829714 | 12 |
| 49 | 2275003 | 3060 | 2459319 |      | 2645226 | 3    | 2832856 | 11 |
| 50 | 2278063 |      | 2462404 | 6    | 2648339 |      | 2835999 | 10 |
| 51 | 2281123 |      | 2465490 |      | 2651452 | 4    | 2839142 | 9  |
| 52 | 2284183 | 1    | 2468576 |      | 2654566 |      | 2842286 | 8  |
| 53 | 2287244 |      | 2471662 | 7    | 2657680 | 5    | 2845430 | 7  |
| 54 | 2290305 | 2    | 2474749 |      | 2660795 |      | 2848575 | 6  |
| 55 | 2293367 |      | 2477836 | 8    | 2663910 | 6    | 2851720 | 5  |
| 56 | 2296429 | 3    | 2480924 |      | 2667026 |      | 2854866 | 4  |
| 57 | 2299492 |      | 2484012 | 9    | 2670142 |      | 2858012 | 3  |
| 58 | 2302555 |      | 2487101 |      | 2673258 | 7    | 2861159 | 2  |
| 59 | 2305618 | 4    | 2490191 | 3090 | 2676375 |      | 2864306 | 1  |
| 60 | 2308682 |      | 2493280 |      | 2679492 |      | 2867453 | 0  |
| 77 |         | 76   |         | 75   |         | 74   |         |    |



| 16 |         |      | 17      |      |         | 18   |         |      | 19 |  |  |
|----|---------|------|---------|------|---------|------|---------|------|----|--|--|
| 0  | 2867453 | 3148 | 3057307 | 3181 | 3249197 | 3216 | 3443276 | 3254 | 60 |  |  |
| 1  | 2870601 |      | 3060487 | 2    | 3252413 | 7    | 3446530 | 5    | 59 |  |  |
| 2  | 2873749 | 9    | 3063669 |      | 3255630 | 8    | 3449785 |      | 58 |  |  |
| 3  | 2876898 | 3150 | 3066851 | 3    | 3258848 | 8    | 3453040 | 6    | 57 |  |  |
| 4  | 2880048 |      | 3070034 | 4    | 3262066 | 9    | 3456296 | 7    | 56 |  |  |
| 5  | 2883198 | 1    | 3073218 |      | 3265285 | 3219 | 3459553 |      | 55 |  |  |
| 6  | 2886349 | 2    | 3076402 | 5    | 3268504 | 3220 | 3462810 | 8    | 54 |  |  |
| 7  | 2889501 |      | 3079587 |      | 3271724 | 0    | 3466068 |      | 53 |  |  |
| 8  | 2892653 | 3    | 3082772 | 6    | 3274944 | 1    | 3469326 | 9    | 52 |  |  |
| 9  | 2895806 | 4    | 3085958 |      | 3278165 | 2    | 3472585 | 3260 | 51 |  |  |
| 10 | 2898960 |      | 3085144 | 7    | 3281387 | 2    | 3475845 |      | 50 |  |  |
| 11 | 2902114 |      | 3092331 |      | 3284609 | 3    | 3479105 | 1    | 49 |  |  |
| 12 | 2905268 | 5    | 3095518 | 8    | 3287832 | 3    | 3482366 | 2    | 48 |  |  |
| 13 | 2908423 |      | 3198706 |      | 3291055 | 5    | 3485628 |      | 47 |  |  |
| 14 | 2911578 | 6    | 3101895 | 9    | 3294280 | 5    | 3488891 | 3    | 46 |  |  |
| 15 | 2914734 |      | 3105084 |      | 3297505 | 6    | 3492154 | 4    | 45 |  |  |
| 16 | 2917890 | 7    | 3108274 | 3190 | 3300731 | 6    | 3495418 | 5    | 44 |  |  |
| 17 | 2921047 |      | 3111464 |      | 3303957 | 7    | 3498683 |      | 43 |  |  |
| 18 | 2924204 | 8    | 3114655 | 1    | 3307184 | 7    | 3501949 | 6    | 42 |  |  |
| 19 | 2927362 |      | 3117846 | 2    | 3310411 | 8    | 3505215 | 7    | 41 |  |  |
| 20 | 2930520 | 9    | 3121038 |      | 3313639 | 9    | 3508482 |      | 40 |  |  |
| 21 | 2933679 |      | 3124230 |      | 3316868 | 3229 | 3511749 | 8    | 39 |  |  |
| 22 | 2936838 | 3160 | 3127423 | 3    | 3320097 | 3230 | 3515017 | 9    | 38 |  |  |
| 23 | 2939999 |      | 3130617 | 4    | 3323327 | 1    | 3518286 |      | 37 |  |  |
| 24 | 2943160 | 1    | 3133811 | 5    | 3326558 | 1    | 3521555 | 3270 | 36 |  |  |
| 25 | 2946321 | 2    | 3137006 |      | 3329789 | 1    | 3524825 |      | 35 |  |  |
| 26 | 2946483 |      | 3140201 | 6    | 3333020 | 2    | 3528096 | 1    | 34 |  |  |
| 27 | 2952645 | 3    | 3143397 | 7    | 3336252 | 3    | 3531368 | 2    | 33 |  |  |
| 28 | 2955808 |      | 3146594 |      | 3339485 | 4    | 3534640 | 3    | 32 |  |  |
| 29 | 2958971 | 4    | 3149791 | 8    | 3342719 | 4    | 3537913 |      | 31 |  |  |
| 30 | 2962135 |      | 3152989 |      | 3345953 |      | 3541186 |      | 30 |  |  |
| 73 |         |      | 72      |      |         | 71   |         |      | 70 |  |  |



| 16 |         |      | 17      |      |  | 18      |      |  | 19      |      |  |    |
|----|---------|------|---------|------|--|---------|------|--|---------|------|--|----|
| 30 | 2962135 |      | 3152989 |      |  | 3345953 |      |  | 3541186 |      |  | 30 |
| 31 | 2965299 | 3164 | 3156187 | 3198 |  | 3349188 | 3235 |  | 3544460 | 3274 |  | 29 |
| 32 | 2968464 | 5    | 3159386 | 9    |  | 3352423 | 6    |  | 3547735 | 5    |  | 28 |
| 33 | 2971629 | 6    | 3162585 |      |  | 3355659 |      |  | 3551010 | 6    |  | 27 |
| 34 | 2974795 | 7    | 3165785 | 3200 |  | 3358896 | 7    |  | 3554286 | 7    |  | 26 |
| 35 | 2977962 |      | 3168986 | 1    |  | 3362133 | 8    |  | 3557563 |      |  | 25 |
| 36 | 2981129 | 8    | 3172187 | 2    |  | 3365371 | 9    |  | 3560840 | 8    |  | 24 |
| 37 | 2984297 |      | 3175389 |      |  | 3368610 |      |  | 3564118 | 9    |  | 23 |
| 38 | 2987465 | 9    | 3178591 | 3    |  | 3371850 | 3240 |  | 3567397 |      |  | 22 |
| 39 | 2990634 |      | 3181794 | 4    |  | 3375090 | 1    |  | 3570676 | 3280 |  | 21 |
| 40 | 2993804 | 3170 | 3184998 | 4    |  | 3378331 | 1    |  | 3573956 | 1    |  | 20 |
| 41 | 2996973 |      | 3188202 | 5    |  | 3381572 | 2    |  | 3577237 | 2    |  | 19 |
| 42 | 3000143 | 1    | 3191407 | 6    |  | 3384814 | 2    |  | 3580519 |      |  | 18 |
| 43 | 3003314 | 2    | 3194613 |      |  | 3388057 |      |  | 3583801 | 3    |  | 17 |
| 44 | 3006486 |      | 3197819 | 7    |  | 3391300 | 3    |  | 3587084 | 3    |  | 16 |
| 45 | 3009658 | 3    | 3201026 |      |  | 3394544 | 4    |  | 3590367 |      |  | 15 |
| 46 | 3012831 |      | 3204233 | 8    |  | 3397798 | 5    |  | 3593651 | 4    |  | 14 |
| 47 | 3016004 | 4    | 3207441 |      |  | 3401033 |      |  | 3596936 | 5    |  | 13 |
| 48 | 3019178 |      | 3210649 | 9    |  | 3404279 | 6    |  | 3600221 | 6    |  | 12 |
| 49 | 3022353 | 5    | 3213858 |      |  | 3407525 | 7    |  | 3603507 | 7    |  | 11 |
| 50 | 3025528 |      | 3217067 |      |  | 3410772 |      |  | 3606794 | 8    |  | 10 |
| 51 | 3028703 | 6    | 3220277 | 3210 |  | 3414020 | 8    |  | 3610082 |      |  | 9  |
| 52 | 3031879 |      | 3223488 | 1    |  | 3417268 |      |  | 3613370 | 9    |  | 8  |
| 53 | 3035055 | 7    | 3226699 | 2    |  | 3420517 | 9    |  | 3616659 |      |  | 7  |
| 54 | 3038232 | 8    | 3229911 |      |  | 3423766 | 3250 |  | 3619949 | 3290 |  | 6  |
| 55 | 3041410 |      | 3233124 | 3    |  | 3427016 | 1    |  | 3623239 | 1    |  | 5  |
| 56 | 3044588 | 9    | 3236337 | 4    |  | 3430267 |      |  | 3626530 |      |  | 4  |
| 57 | 3047767 |      | 3239551 | 5    |  | 3433518 | 2    |  | 3629822 | 2    |  | 3  |
| 58 | 3050946 |      | 3242766 |      |  | 3436770 | 3    |  | 3633115 | 3    |  | 2  |
| 59 | 3054126 | 3180 | 3245981 | 6    |  | 3440023 |      |  | 3636408 | 4    |  | 1  |
| 60 | 3057307 | 1    | 3249197 |      |  | 3443276 |      |  | 3639702 |      |  | 0  |
| 73 |         |      | 72      |      |  | 71      |      |  | 70      |      |  |    |



|    | 20      |      | 21      |      | 22      |      | 23      |      |
|----|---------|------|---------|------|---------|------|---------|------|
| 0  | 3639702 | 3295 | 3838640 | 3338 | 4040262 | 3384 | 4244748 | 3486 |
| 1  | 3642997 | 6    | 3841978 | 8    | 4043647 | 4    | 4248182 | 7    |
| 2  | 3646293 | 6    | 3845316 | 9    | 4047031 | 5    | 4251617 | 8    |
| 3  | 3649589 | 7    | 3848655 | 3340 | 4050416 | 6    | 4255052 | 9    |
| 4  | 3652886 | 7    | 3851995 | 1    | 4053802 | 7    | 4258488 | 3490 |
| 5  | 3656183 | 8    | 3855336 | 2    | 4057189 | 8    | 4261925 | 0    |
| 6  | 3659481 | 9    | 3858678 | 2    | 4060577 | 9    | 4265363 | 1    |
| 7  | 3662780 | 9    | 3862020 | 3    | 4063966 | 3390 | 4268801 | 2    |
| 8  | 3666079 | 3300 | 3865363 | 4    | 4067356 | 1    | 4265363 | 3    |
| 9  | 3669379 | 1    | 3868707 | 5    | 4070747 | 2    | 4268801 | 4    |
| 10 | 3672680 | 2    | 3872052 | 5    | 4074139 | 2    | 4272240 | 5    |
| 11 | 3675982 | 2    | 3875397 | 6    | 4077531 | 3    | 4275680 | 6    |
| 12 | 3679284 | 3    | 3878742 | 7    | 4080924 | 4    | 4279121 | 7    |
| 13 | 3682587 | 4    | 3882090 | 8    | 4084318 | 5    | 4282563 | 8    |
| 14 | 3685891 | 4    | 3885438 | 6    | 4087713 | 6    | 4286006 | 9    |
| 15 | 3689195 | 5    | 3888787 | 9    | 4091109 | 7    | 4289450 | 3500 |
| 16 | 3692500 | 6    | 3892136 | 3350 | 4094506 | 7    | 4292895 | 1    |
| 17 | 3695806 | 7    | 3895486 | 1    | 4097903 | 8    | 4296340 | 1    |
| 18 | 3699113 | 7    | 3898837 | 1    | 4101301 | 8    | 4299786 | 2    |
| 19 | 3702420 | 8    | 3902188 | 2    | 4104699 | 9    | 4303233 | 3    |
| 20 | 3705728 | 9    | 3905540 | 3    | 4108097 | 3400 | 4306681 | 4    |
| 21 | 3709037 | 3310 | 3908893 | 4    | 4111497 | 1    | 4310130 | 5    |
| 22 | 3712347 | 0    | 3912247 | 4    | 4114898 | 2    | 4313580 | 6    |
| 23 | 3715657 | 1    | 3915601 | 5    | 4118300 | 3    | 4317031 | 7    |
| 24 | 3718968 | 1    | 3918956 | 6    | 4121703 | 4    | 4320487 | 8    |
| 25 | 3722279 | 2    | 3922312 | 7    | 4125107 | 4    | 4323941 | 9    |
| 26 | 3725591 | 3    | 3925669 | 8    | 4128511 | 5    | 4327396 | 3510 |
| 27 | 3728904 | 4    | 3929027 | 8    | 4131916 | 6    | 4330841 | 1    |
| 28 | 3732218 | 5    | 3932385 | 9    | 4135322 | 6    | 4334296 | 2    |
| 29 | 3735533 | 5    | 3935744 | 3360 | 4138728 | 7    | 4337752 | 3    |
| 30 | 3738848 | 5    | 3939104 | 4    | 4142135 | 7    | 4341209 | 4    |
|    | 69      |      | 68      |      | 67      |      | 66      |      |



| 20 |         | 21   |         | 22   |         | 23   |         |    |
|----|---------|------|---------|------|---------|------|---------|----|
| 30 | 3738848 | 3316 | 3939104 | 3361 | 4142135 | 3409 | 4348124 | 30 |
| 31 | 3742164 | 6    | 3942465 | 1    | 4145544 | 9    | 4351583 | 29 |
| 32 | 3745480 | 7    | 3945826 | 2    | 4148953 | 0    | 4355043 | 28 |
| 33 | 3748797 | 8    | 3949188 | 3    | 4152363 | 1    | 4358504 | 27 |
| 34 | 3752115 | 9    | 3952551 | 4    | 4155773 | 2    | 4361966 | 26 |
| 35 | 3755434 | 0    | 3955915 | 5    | 4159184 | 3    | 4365429 | 25 |
| 36 | 3758753 | 1    | 3959280 | 6    | 4162596 | 4    | 4368893 | 24 |
| 37 | 3762073 | 2    | 3962646 | 7    | 4166009 | 5    | 4372357 | 23 |
| 38 | 3765394 | 3    | 3966012 | 8    | 4169423 | 6    | 4375822 | 22 |
| 39 | 3768716 | 4    | 3969379 | 9    | 4172838 | 7    | 4379288 | 21 |
| 40 | 3772038 | 5    | 3972746 | 0    | 4176255 | 8    | 4382755 | 20 |
| 41 | 3775361 | 6    | 3976114 | 1    | 4179672 | 9    | 4386223 | 19 |
| 42 | 3778685 | 7    | 3979483 | 2    | 4183090 | 0    | 4389692 | 18 |
| 43 | 3782010 | 8    | 3982853 | 3    | 4186509 | 1    | 4393162 | 17 |
| 44 | 3785335 | 9    | 3986224 | 4    | 4189928 | 2    | 4396633 | 16 |
| 45 | 3788661 | 0    | 3989596 | 5    | 4193348 | 3    | 4400105 | 15 |
| 46 | 3791988 | 1    | 3992969 | 6    | 4196769 | 4    | 4403578 | 14 |
| 47 | 3795315 | 2    | 3996342 | 7    | 4200191 | 5    | 4407051 | 13 |
| 48 | 3798643 | 3    | 3999716 | 8    | 4203613 | 6    | 4410525 | 12 |
| 49 | 3801972 | 4    | 4003090 | 9    | 4207036 | 7    | 4414000 | 11 |
| 50 | 3805302 | 5    | 4006465 | 0    | 4210460 | 8    | 4417476 | 10 |
| 51 | 3808632 | 6    | 4009841 | 1    | 4213885 | 9    | 4420953 | 9  |
| 52 | 3811963 | 7    | 4013217 | 2    | 4217311 | 0    | 4424431 | 8  |
| 53 | 3815295 | 8    | 4016594 | 3    | 4220738 | 1    | 4427910 | 7  |
| 54 | 3818628 | 9    | 4019972 | 4    | 4224165 | 2    | 4431390 | 6  |
| 55 | 3821961 | 0    | 4023351 | 5    | 4227593 | 3    | 4434871 | 5  |
| 56 | 3825295 | 1    | 4026731 | 6    | 4231022 | 4    | 4438352 | 4  |
| 57 | 3828630 | 2    | 4030112 | 7    | 4234452 | 5    | 4441834 | 3  |
| 58 | 3831966 | 3    | 4033494 | 8    | 4237883 | 6    | 4445317 | 2  |
| 59 | 3835303 | 4    | 4036877 | 9    | 4241315 | 7    | 4448801 | 1  |
| 60 | 3838640 | 5    | 4040262 | 0    | 4244748 | 8    | 4452286 | 0  |
| 69 |         | 68   |         | 67   |         | 66   |         |    |



# C A N O N

| 24 |         |      | 25      |      |  | 26      |      |  | 27      |      |    |
|----|---------|------|---------|------|--|---------|------|--|---------|------|----|
| 0  | 4452286 | 3486 | 4663081 | 3542 |  | 4877328 | 3602 |  | 5095254 | 3665 | 60 |
| 1  | 4455772 | 7    | 4666623 | 3    |  | 4880930 | 3    |  | 5098919 | 6    | 59 |
| 2  | 4459259 | 8    | 4670166 | 4    |  | 3884533 | 4    |  | 5102585 | 7    | 58 |
| 3  | 4462747 | 9    | 4673710 | 5    |  | 4888137 | 5    |  | 5106252 | 8    | 57 |
| 4  | 4466236 |      | 4677255 | 6    |  | 4891742 | 5    |  | 5109920 | 9    | 56 |
| 5  | 4469726 | 3490 | 4680801 | 7    |  | 4895347 | 6    |  | 5113589 |      | 55 |
| 6  | 4473216 | 0    | 4684348 | 8    |  | 4898953 | 7    |  | 5117259 | 3670 | 54 |
| 7  | 4476707 | 1    | 4687896 | 8    |  | 4902560 | 8    |  | 5120930 | 1    | 53 |
| 8  | 4480199 | 2    | 4691444 | 9    |  | 4906168 | 9    |  | 5124602 | 2    | 52 |
| 9  | 4483692 | 3    | 4694993 |      |  | 4909777 |      |  | 5128275 | 3    |    |
| 10 | 4487186 | 4    | 4698543 | 3550 |  | 4913387 | 3610 |  | 5131949 | 4    | 51 |
| 11 | 4490681 | 5    | 4702094 | 1    |  | 4916998 | 1    |  | 5135625 | 6    | 50 |
| 12 | 4494177 | 6    | 4705646 | 2    |  | 4920610 | 2    |  | 5139302 | 7    | 49 |
| 13 | 4497674 | 7    | 4709199 | 3    |  | 4924223 | 3    |  | 5142980 | 8    | 48 |
| 14 | 4501172 | 8    | 4712753 | 4    |  | 4927838 | 5    |  | 5146659 | 9    | 47 |
| 15 | 4504671 | 9    | 4716308 | 5    |  | 4931454 | 6    |  | 5150339 |      | 46 |
| 16 | 4508171 | 3500 | 4719864 | 6    |  | 4935071 | 7    |  | 5154020 | 1    | 45 |
| 17 | 4511672 | 1    | 4723422 | 8    |  | 4938689 | 8    |  | 5157702 | 2    | 44 |
| 18 | 4515173 | 2    | 4726981 | 9    |  | 4942308 | 9    |  | 5161385 | 3    | 43 |
| 19 | 4518675 |      | 4730541 |      |  | 4945928 | 3620 |  | 5165069 | 4    | 42 |
| 20 | 4522178 | 3560 | 4734102 | 1    |  | 4949549 | 1    |  | 5168755 | 6    | 41 |
| 21 | 4525682 | 2    | 4737664 | 2    |  | 4953171 | 2    |  | 5172442 | 7    | 40 |
| 22 | 4529187 | 3    | 4741227 | 3    |  | 4956794 | 3    |  | 5176130 | 8    | 39 |
| 23 | 4532693 | 4    | 4744790 | 4    |  | 4960418 | 4    |  | 5179819 | 9    | 38 |
| 24 | 4536200 | 5    | 4748354 | 5    |  | 4964043 | 5    |  | 5183509 |      | 37 |
| 25 | 4539708 | 6    | 4751919 | 6    |  | 4967669 | 6    |  | 5187200 | 1    | 36 |
| 26 | 4543217 | 7    | 4755485 | 7    |  | 4971296 | 7    |  | 5190892 | 2    | 35 |
| 27 | 4546727 | 3510 | 4759052 | 8    |  | 4974924 | 8    |  | 5194585 | 3    | 34 |
| 28 | 4550238 | 1    | 4762620 | 9    |  | 4978553 | 9    |  | 5198279 | 4    | 33 |
| 29 | 4553750 | 2    | 4766189 |      |  | 4982184 | 3631 |  | 5201974 | 5    | 32 |
| 30 | 4557264 | 4    | 4769759 | 3570 |  | 4985816 | 2    |  | 5205670 | 6    | 31 |
| 65 |         |      | 64      |      |  | 63      |      |  | 62      |      |    |



| 24 |         | 25   |         | 26   |         | 27   |         |      |    |
|----|---------|------|---------|------|---------|------|---------|------|----|
| 30 | 4557264 | 3514 | 4769759 | 3571 | 4985816 | 3632 | 5205670 | 3698 | 20 |
| 31 | 4560778 | 5    | 4773330 | 2    | 4989448 | 3    | 5209368 | 9    | 29 |
| 32 | 4564193 | 6    | 4776902 | 3    | 4993081 | 5    | 5213067 |      | 28 |
| 33 | 4567809 | 7    | 4780475 | 4    | 3996716 | 6    | 5216767 | 3700 | 27 |
| 34 | 4571326 | 7    | 4784049 | 5    | 5000352 | 7    | 5220468 | 2    | 26 |
| 35 | 4574843 | 8    | 4787624 | 6    | 5003989 | 8    | 5224170 | 3    | 25 |
| 36 | 4578361 | 9    | 4791200 | 7    | 5007627 | 9    | 5227873 | 4    | 24 |
| 37 | 4581880 | 3520 | 4794777 | 8    | 5011266 | 3640 | 5231577 | 6    | 23 |
| 38 | 4585400 | 1    | 4798355 | 9    | 5014906 | 1    | 5235283 | 7    | 22 |
| 39 | 4588921 | 2    | 4801934 | 3581 | 5018547 | 2    | 5238990 | 8    | 21 |
| 40 | 4592443 | 3    | 4805515 | 1    | 5022189 | 3    | 5242698 | 9    | 20 |
| 41 | 4595966 | 4    | 4809096 | 2    | 5025832 | 4    | 5246407 | 3710 | 19 |
| 42 | 4599490 | 5    | 4812678 | 3    | 5029476 | 5    | 5250117 | 1    | 18 |
| 43 | 4603015 | 6    | 4816261 | 4    | 5033121 | 6    | 5253828 | 2    | 17 |
| 44 | 4606541 | 7    | 4819845 | 5    | 5036767 | 7    | 5257540 | 4    | 16 |
| 45 | 4610068 | 8    | 4823430 | 6    | 5040414 | 8    | 5261254 | 5    | 15 |
| 46 | 4613596 | 9    | 4827016 | 7    | 5044062 | 3650 | 5264969 | 6    | 14 |
| 47 | 4617125 | 9    | 4830603 | 8    | 5047712 | 1    | 5268685 | 7    | 13 |
| 48 | 4620654 | 3530 | 4834191 | 9    | 5051363 | 2    | 5272402 | 8    | 12 |
| 49 | 4624184 | 1    | 4837780 | 3591 | 5055015 | 3    | 5276120 | 9    | 11 |
| 50 | 4627715 | 2    | 4841371 | 1    | 5058668 | 4    | 5279839 | 3720 | 10 |
| 51 | 4631247 | 3    | 4844962 | 2    | 5062322 | 5    | 5283959 | 1    | 9  |
| 52 | 4634780 | 4    | 4848554 | 3    | 5065977 | 6    | 5287280 | 3    | 8  |
| 53 | 4638314 | 5    | 4852147 | 4    | 5069633 | 7    | 5291003 | 4    | 7  |
| 54 | 4641849 | 6    | 4855741 | 5    | 5073290 | 8    | 5294727 | 5    | 6  |
| 55 | 4645385 | 7    | 4859336 | 6    | 5076948 | 9    | 5298452 | 6    | 5  |
| 56 | 4648922 | 8    | 4862932 | 7    | 5080607 | 3660 | 5302178 | 7    | 4  |
| 57 | 4652460 | 9    | 4866529 | 8    | 5084267 | 1    | 5305905 | 8    | 3  |
| 58 | 4655999 | 3541 | 4870127 | 3600 | 5087928 | 2    | 5309633 | 3730 | 2  |
| 59 | 4659540 | 1    | 4873727 | 1    | 5091590 | 4    | 5313363 | 1    | 1  |
| 60 | 4663081 |      | 4877328 |      | 5095254 |      | 5317094 |      | 0  |
| 65 |         | 64   |         | 63   |         | 62   |         |      |    |



# C A N O N

| 28 |         |      | 29      |      |         | 30   |         |      | 31 |  |  |
|----|---------|------|---------|------|---------|------|---------|------|----|--|--|
| 0  | 5317094 | 3732 | 5543090 | 3803 | 5773502 | 3879 | 6008606 | 3960 | 60 |  |  |
| 1  | 5320826 | 3    | 5546893 | 4    | 5777381 | 3881 | 6012566 | 2    | 59 |  |  |
| 2  | 5324559 | 4    | 5550697 | 6    | 5781262 | 2    | 6016528 | 3    | 58 |  |  |
| 3  | 5328293 | 5    | 5554503 | 7    | 5785144 | 3    | 6020491 | 4    | 57 |  |  |
| 4  | 5332028 | 7    | 5558310 | 8    | 5789027 | 4    | 6024455 | 5    | 56 |  |  |
| 5  | 5335765 | 8    | 5562118 | 9    | 5792911 | 6    | 6028420 | 7    | 55 |  |  |
| 6  | 5339503 | 9    | 5565927 | 3811 | 5796797 | 7    | 6032387 | 8    | 54 |  |  |
| 7  | 5343242 | 3740 | 5569738 | 2    | 5800684 | 8    | 6036355 | 9    | 53 |  |  |
| 8  | 5346982 | 1    | 5573550 | 3    | 5804572 | 3890 | 6040324 | 3971 | 52 |  |  |
| 9  | 5350723 | 2    | 5577363 | 4    | 5808462 | 1    | 6044295 | 2    | 51 |  |  |
| 10 | 5354465 | 4    | 5581177 | 6    | 5812353 | 2    | 6048267 | 4    | 50 |  |  |
| 11 | 5358209 | 5    | 5584993 | 7    | 5816245 | 4    | 6052241 | 5    | 49 |  |  |
| 12 | 5361954 | 6    | 5588810 | 8    | 5820139 | 5    | 6056216 | 7    | 48 |  |  |
| 13 | 5365700 | 7    | 5592628 | 9    | 5824034 | 6    | 6060193 | 8    | 47 |  |  |
| 14 | 5369447 | 8    | 5596447 | 3821 | 5827930 | 8    | 6064171 | 9    | 46 |  |  |
| 15 | 5373195 | 9    | 5600268 | 2    | 5831828 | 9    | 6068150 | 3981 | 45 |  |  |
| 16 | 5376944 | 3750 | 5604090 | 3    | 5835727 | 3900 | 6072131 | 2    | 44 |  |  |
| 17 | 5380694 | 1    | 5607913 | 4    | 5839627 | 1    | 6076113 | 3    | 43 |  |  |
| 18 | 5384445 | 3    | 5611727 | 5    | 5843528 | 3    | 6080096 | 5    | 42 |  |  |
| 19 | 5388198 | 4    | 5615562 | 6    | 5847431 | 4    | 6084081 | 6    | 41 |  |  |
| 20 | 5391952 | 5    | 5619388 | 8    | 5851335 | 6    | 6088067 | 8    | 40 |  |  |
| 21 | 5395707 | 6    | 5623216 | 9    | 5855241 | 7    | 6092055 | 9    | 39 |  |  |
| 22 | 5399463 | 8    | 5627045 | 3830 | 5859148 | 8    | 6096044 | 3991 | 38 |  |  |
| 23 | 5403221 | 9    | 5630875 | 2    | 5863056 | 3910 | 6100035 | 2    | 37 |  |  |
| 24 | 5406980 | 3760 | 5634707 | 3    | 5866966 | 1    | 6104027 | 3    | 36 |  |  |
| 25 | 5410740 | 1    | 5638540 | 4    | 5870877 | 2    | 6108020 | 5    | 35 |  |  |
| 26 | 5414501 | 2    | 5642374 | 6    | 5874489 | 3    | 6112015 | 5    | 34 |  |  |
| 27 | 5418263 | 3    | 5646210 | 7    | 5878702 | 5    | 6116011 | 8    | 33 |  |  |
| 28 | 5422026 | 5    | 5650047 | 8    | 5882617 | 6    | 6120009 | 9    | 32 |  |  |
| 29 | 5425791 | 6    | 5653885 | 3840 | 5886533 | 7    | 6124008 | 4000 | 31 |  |  |
| 30 | 5429557 |      | 5657725 |      | 5890450 |      | 6128008 |      | 30 |  |  |
| 61 |         |      | 60      |      |         | 59   |         |      | 58 |  |  |



| 28 |         |      | 29      |      |         | 30   |         |      | 31 |  |  |
|----|---------|------|---------|------|---------|------|---------|------|----|--|--|
| 30 | 5429557 | 3767 | 5657725 | 3841 | 5890450 | 3919 | 6128008 | 4002 | 30 |  |  |
| 31 | 5433324 | 8    | 5661566 | 2    | 5894369 | 3920 | 6132010 | 3    | 29 |  |  |
| 32 | 5437092 | 9    | 5665408 | 3    | 5898289 | 2    | 6136013 | 5    | 28 |  |  |
| 33 | 5440861 | 3771 | 5669251 | 5    | 5902211 | 3    | 6140018 | 6    | 27 |  |  |
| 34 | 5444632 | 2    | 5673096 | 6    | 5906134 | 4    | 6144024 | 8    | 26 |  |  |
| 35 | 5448404 | 3    | 5676942 | 7    | 5910058 | 6    | 6148032 | 9    | 25 |  |  |
| 36 | 5452177 | 4    | 5680789 | 8    | 5913984 | 7    | 6152041 | 4011 | 24 |  |  |
| 37 | 5455951 | 5    | 5684637 | 9    | 5917911 | 8    | 6156052 | 2    | 23 |  |  |
| 38 | 5459726 | 7    | 5688486 | 3851 | 5921839 | 3930 | 6160064 | 3    | 22 |  |  |
| 39 | 5463503 | 8    | 5692337 | 2    | 5925769 | 1    | 6164077 | 5    | 21 |  |  |
| 40 | 5467281 | 9    | 5696189 | 4    | 5929700 | 3    | 6168092 | 6    | 20 |  |  |
| 41 | 5471060 | 3780 | 5700043 | 5    | 5933633 | 4    | 6172108 | 8    | 19 |  |  |
| 42 | 5474840 | 1    | 5703898 | 6    | 5937567 | 5    | 6176126 | 4021 | 18 |  |  |
| 43 | 5478621 | 3    | 5707754 | 7    | 5941502 | 6    | 6180147 | 1    | 17 |  |  |
| 44 | 5482404 | 4    | 5711611 | 8    | 5945438 | 8    | 6184168 | 2    | 16 |  |  |
| 45 | 5486188 | 5    | 5715469 | 3860 | 5949376 | 9    | 6188190 | 3    | 15 |  |  |
| 46 | 5489973 | 6    | 5719329 | 1    | 5955315 | 3940 | 6192213 | 4    | 14 |  |  |
| 47 | 5493759 | 7    | 5723190 | 2    | 5957255 | 2    | 6196237 | 6    | 13 |  |  |
| 48 | 5497546 | 9    | 5727052 | 4    | 5961197 | 3    | 6200263 | 7    | 12 |  |  |
| 49 | 5501335 | 3790 | 5730916 | 5    | 5965140 | 4    | 6204290 | 9    | 11 |  |  |
| 50 | 5505125 | 1    | 5734781 | 6    | 5969084 | 6    | 6208319 | 4031 | 10 |  |  |
| 51 | 5508916 | 2    | 5738647 | 8    | 5973030 | 7    | 6212350 | 2    | 9  |  |  |
| 52 | 5512708 | 3    | 5742515 | 9    | 5976779 | 9    | 6216382 | 4    | 8  |  |  |
| 53 | 5516501 | 5    | 5746384 | 3870 | 5980926 | 3950 | 6220416 | 5    | 7  |  |  |
| 54 | 5520296 | 6    | 5750254 | 1    | 5984876 | 1    | 6224451 | 7    | 6  |  |  |
| 55 | 5524092 | 7    | 5754125 | 3    | 5988827 | 3    | 6228488 | 8    | 5  |  |  |
| 56 | 5527889 | 8    | 5757998 | 4    | 5992780 | 4    | 6232526 | 4040 | 4  |  |  |
| 57 | 5531687 | 3800 | 5761872 | 5    | 5996734 | 6    | 6236566 | 1    | 3  |  |  |
| 58 | 5535487 | 1    | 5765747 | 7    | 6000690 | 7    | 6240607 | 2    | 2  |  |  |
| 59 | 5539288 | 2    | 5769624 | 8    | 6004647 | 9    | 6244649 | 4    | 1  |  |  |
| 60 | 5543090 |      | 5773502 |      | 6008606 |      | 6248693 |      | 0  |  |  |
| 61 |         |      | 60      |      |         | 59   |         |      | 58 |  |  |



# C A N O N

| 32 |         |      | 33      |      |         | 34   |         |      | 35 |  |  |
|----|---------|------|---------|------|---------|------|---------|------|----|--|--|
| 0  | 6248693 | 4045 | 6494076 | 4136 | 6745085 | 4233 | 7002075 | 4336 | 60 |  |  |
| 1  | 6252738 | 7    | 6498212 | 8    | 6749318 | 5    | 7006411 | 8    | 59 |  |  |
| 2  | 6256785 | 9    | 6502350 | 9    | 6753553 | 6    | 7010749 | 9    | 58 |  |  |
| 3  | 6260834 | 4050 | 6506489 | 4141 | 6757789 | 8    | 7015088 | 4341 | 57 |  |  |
| 4  | 6264884 | 1    | 6510630 | 3    | 6762027 | 4240 | 7019429 | 3    | 56 |  |  |
| 5  | 6268935 | 3    | 6514773 | 4    | 6766267 | 1    | 7023772 | 5    | 55 |  |  |
| 6  | 6272988 | 4    | 6518917 | 6    | 6770508 | 3    | 7028117 | 6    | 54 |  |  |
| 7  | 6277042 | 6    | 6523063 | 7    | 6774751 | 5    | 7032463 | 8    | 53 |  |  |
| 8  | 6281098 | 7    | 6527200 | 9    | 6778996 | 7    | 7036811 | 4350 | 52 |  |  |
| 9  | 6285155 | 9    | 6531359 | 4151 | 6783243 | 8    | 7041161 | 2    | 51 |  |  |
| 10 | 6289214 | 4060 | 6535510 | 2    | 6787491 | 4250 | 7045513 | 4    | 50 |  |  |
| 11 | 6293274 | 1    | 6539662 | 4    | 6791741 | 2    | 7049867 | 6    | 49 |  |  |
| 12 | 6297336 | 3    | 6543816 | 5    | 6795993 | 3    | 7054223 | 8    | 48 |  |  |
| 13 | 6301399 | 5    | 6547971 | 7    | 6800246 | 5    | 7058581 | 9    | 47 |  |  |
| 14 | 6305464 | 6    | 6552128 | 9    | 6804501 | 7    | 7062940 | 4361 | 46 |  |  |
| 15 | 6309530 | 8    | 6556287 | 4160 | 6808758 | 8    | 7067301 | 3    | 45 |  |  |
| 16 | 6313598 | 9    | 6560447 | 2    | 6813016 | 4260 | 7071664 | 5    | 44 |  |  |
| 17 | 6317667 | 4071 | 6564609 | 3    | 6817276 | 2    | 7076029 | 6    | 43 |  |  |
| 18 | 6321738 | 2    | 6568772 | 5    | 6821538 | 3    | 7070395 | 8    | 42 |  |  |
| 19 | 6325810 | 3    | 6572937 | 6    | 6825801 | 5    | 7084763 | 4370 | 41 |  |  |
| 20 | 6329883 | 5    | 6577103 | 8    | 6830066 | 7    | 7089133 | 2    | 40 |  |  |
| 21 | 6333958 | 6    | 6581271 | 9    | 6834333 | 9    | 7093505 | 4    | 39 |  |  |
| 22 | 6338034 | 8    | 6585440 | 4171 | 6838602 | 4270 | 7097879 | 5    | 38 |  |  |
| 23 | 6342112 | 9    | 6589611 | 3    | 6842872 | 2    | 7102254 | 7    | 37 |  |  |
| 24 | 6346191 | 4081 | 6593784 | 4    | 6847144 | 3    | 7106631 | 9    | 36 |  |  |
| 25 | 6350272 | 3    | 6597958 | 6    | 6851417 | 5    | 7111010 | 4381 | 35 |  |  |
| 26 | 6354355 | 4    | 6602134 | 8    | 6855692 | 7    | 7115391 | 2    | 34 |  |  |
| 27 | 6358439 | 6    | 6606312 | 9    | 6859969 | 8    | 7119773 | 4    | 33 |  |  |
| 28 | 6362525 | 8    | 6610491 | 4181 | 6864247 | 4280 | 7124167 | 6    | 32 |  |  |
| 29 | 6366613 | 9    | 6614672 | 3    | 6868527 | 2    | 7128543 | 8    | 31 |  |  |
| 30 | 6370702 |      | 6618855 |      | 6872809 |      | 7132931 |      | 30 |  |  |
| 57 |         |      | 56      |      |         | 55   |         |      | 54 |  |  |



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|    |         |      |         |      |         |      |         |      |    |
|----|---------|------|---------|------|---------|------|---------|------|----|
| 30 | 6370702 | 4090 | 6618855 | 4184 | 6872809 | 4284 | 7132931 | 4390 | 30 |
| 31 | 6374792 | 2    | 6623039 | 6    | 6877093 | 6    | 7137321 | 2    | 29 |
| 32 | 6378884 | 3    | 6627225 | 8    | 6881379 | 7    | 7141713 | 3    | 28 |
| 33 | 6382977 | 5    | 6631413 | 9    | 6885666 | 9    | 7146106 | 5    | 27 |
| 34 | 6387072 | 7    | 6635603 | 4190 | 6889955 | 4291 | 7150501 | 7    | 26 |
| 35 | 6391169 | 8    | 6639792 | 2    | 6894246 | 3    | 7154898 | 9    | 25 |
| 36 | 6395267 | 9    | 6643984 | 4    | 6898539 | 4    | 7159297 | 4401 | 24 |
| 37 | 6399366 | 4101 | 6648178 | 5    | 6902833 | 6    | 7163698 | 2    | 23 |
| 38 | 6403467 | 2    | 6652373 | 7    | 6907129 | 7    | 7168100 | 4    | 22 |
| 39 | 6407569 | 4    | 6656570 | 8    | 6911426 | 8    | 7172504 | 6    | 21 |
| 40 | 6411673 | 6    | 6660768 | 4200 | 6915725 | 4301 | 7176910 | 8    | 20 |
| 41 | 6415779 | 7    | 6664968 | 2    | 6920026 | 3    | 7181318 | 4410 | 19 |
| 42 | 6419886 | 9    | 6669170 | 3    | 6924329 | 5    | 7185728 | 2    | 18 |
| 43 | 6423995 | 4110 | 6673373 | 5    | 6928634 | 6    | 7190140 | 4    | 17 |
| 44 | 6428105 | 1    | 6677578 | 7    | 6932940 | 8    | 7194554 | 6    | 16 |
| 45 | 6432216 | 3    | 6681785 | 9    | 6937248 | 4310 | 7198970 | 7    | 15 |
| 46 | 6436329 | 5    | 6685994 | 4210 | 6941558 | 1    | 7203387 | 9    | 14 |
| 47 | 6440444 | 6    | 6690204 | 2    | 6945869 | 3    | 7207806 | 4421 | 13 |
| 48 | 6444560 | 8    | 6694416 | 4    | 6950182 | 5    | 7212227 | 3    | 12 |
| 49 | 6458678 | 4120 | 6698630 | 5    | 6954497 | 6    | 7216650 | 5    | 11 |
| 50 | 6452798 | 1    | 6702845 | 7    | 6958813 | 8    | 7221075 | 7    | 10 |
| 51 | 6456919 | 3    | 6707062 | 9    | 6963131 | 4320 | 7225502 | 9    | 9  |
| 52 | 6461042 | 4    | 6711281 | 4220 | 6967451 | 2    | 7229931 | 4431 | 8  |
| 53 | 6465166 | 6    | 6715501 | 2    | 6971773 | 4    | 7234362 | 2    | 7  |
| 54 | 6469292 | 7    | 6719723 | 3    | 6976097 | 6    | 7238794 | 4    | 6  |
| 55 | 6473419 | 9    | 6723946 | 5    | 6980423 | 7    | 7243228 | 6    | 5  |
| 56 | 6477548 | 4130 | 6728171 | 6    | 6984750 | 9    | 7247664 | 8    | 4  |
| 57 | 6481678 | 1    | 6732397 | 8    | 6989079 | 4330 | 7252102 | 9    | 3  |
| 58 | 6485809 | 3    | 6736625 | 9    | 6993409 | 2    | 7256541 | 4441 | 2  |
| 59 | 6489942 | 4    | 6740854 | 4231 | 6997741 | 4    | 7260982 | 2    | 1  |
| 60 | 6494076 |      | 6745085 |      | 7002075 |      | 7265424 |      | 0  |

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# C A N O N

| 36 |         |      | 37      |      |         | 38   |         |      | 39 |  |  |
|----|---------|------|---------|------|---------|------|---------|------|----|--|--|
| 0  | 7265424 | 4445 | 7535541 | 4562 | 7812856 | 4686 | 8097840 | 4818 | 60 |  |  |
| 1  | 7269869 | 7    | 7540103 | 4    | 7817542 | 8    | 8102658 | 4820 | 59 |  |  |
| 2  | 7274316 | 9    | 7544667 | 6    | 7822230 | 4690 | 8107478 | 2    | 58 |  |  |
| 3  | 7278765 | 4451 | 7549233 | 8    | 7826920 | 2    | 8112300 | 4    | 57 |  |  |
| 4  | 7283216 | 3    | 7553801 | 4570 | 7831612 | 4    | 8117124 | 7    | 56 |  |  |
| 5  | 7287669 | 5    | 7558371 | 2    | 7836306 | 6    | 8121951 | 9    | 55 |  |  |
| 6  | 7292124 | 7    | 7562943 | 4    | 7841002 | 8    | 8126780 | 4831 | 54 |  |  |
| 7  | 7296581 | 9    | 7567517 | 6    | 7845700 | 4700 | 8131611 | 3    | 53 |  |  |
| 8  | 7301040 | 4461 | 7572093 | 7    | 7850400 | 2    | 8136444 | 6    | 52 |  |  |
| 9  | 7305501 | 2    | 7576670 | 9    | 7855102 | 5    | 8141280 | 8    | 51 |  |  |
| 10 | 7309963 | 4    | 7581249 | 4581 | 7859807 | 7    | 8146118 | 4840 | 50 |  |  |
| 11 | 7314427 | 6    | 7585830 | 3    | 7864514 | 9    | 8150958 | 3    | 49 |  |  |
| 12 | 7318893 | 8    | 7590413 | 6    | 7869223 | 4711 | 8155801 | 5    | 48 |  |  |
| 13 | 7323361 | 4470 | 7594999 | 8    | 7873934 | 3    | 8160646 | 7    | 47 |  |  |
| 14 | 7327831 | 2    | 7599587 | 4590 | 7878647 | 6    | 8165493 | 4850 | 46 |  |  |
| 15 | 7332303 | 4    | 7604177 | 2    | 7883363 | 8    | 8170343 | 2    | 45 |  |  |
| 16 | 7336777 | 6    | 7608769 | 4    | 7888081 | 4720 | 8175195 | 4    | 44 |  |  |
| 17 | 7341253 | 8    | 7613363 | 6    | 7892801 | 2    | 8180049 | 6    | 43 |  |  |
| 18 | 7345731 | 9    | 7617959 | 8    | 7897523 | 4    | 8184905 | 9    | 42 |  |  |
| 19 | 7350210 | 4481 | 7622557 | 4600 | 7902247 | 6    | 8189764 | 4861 | 41 |  |  |
| 20 | 7354691 | 3    | 7627157 | 2    | 7906973 | 9    | 8194625 | 3    | 40 |  |  |
| 21 | 7359174 | 5    | 7631759 | 4    | 7911702 | 4731 | 8199488 | 6    | 39 |  |  |
| 22 | 7363659 | 7    | 7636363 | 6    | 7916433 | 3    | 8204354 | 8    | 38 |  |  |
| 23 | 7368146 | 9    | 7640969 | 8    | 7921166 | 5    | 8209222 | 4870 | 37 |  |  |
| 24 | 7372635 | 4491 | 7645577 | 4610 | 7925901 | 7    | 8214092 | 3    | 36 |  |  |
| 25 | 7377126 | 3    | 7650187 | 2    | 7930638 | 4740 | 8218965 | 5    | 35 |  |  |
| 26 | 7381619 | 5    | 7654799 | 4    | 7935378 | 2    | 8223840 | 7    | 34 |  |  |
| 27 | 7386114 | 7    | 7659413 | 7    | 7940120 | 4    | 8228717 | 4880 | 33 |  |  |
| 28 | 7390611 | 9    | 7664030 | 9    | 7944864 | 6    | 8233597 | 2    | 32 |  |  |
| 29 | 7395110 | 4500 | 7668649 | 4621 | 7949610 | 8    | 8238479 | 4    | 31 |  |  |
| 30 | 7399610 |      | 7663270 |      | 7954358 |      | 8243363 |      | 30 |  |  |
| 53 |         |      | 52      |      |         | 51   |         |      | 50 |  |  |



| 36 |         |      | 37      |      |  | 38      |      |  | 39      |      |    |  |
|----|---------|------|---------|------|--|---------|------|--|---------|------|----|--|
| 30 | 7399610 | 4502 | 7673270 | 4623 |  | 7954358 | 4751 |  | 8243363 | 4887 | 30 |  |
| 31 | 7404112 | 4    | 7677893 | 5    |  | 7959109 | 3    |  | 8248250 | 9    | 29 |  |
| 32 | 7408616 | 6    | 7682518 | 7    |  | 7963862 | 5    |  | 8253139 |      | 28 |  |
| 33 | 7413122 | 8    | 7687145 | 9    |  | 7968617 | 7    |  | 8258031 | 4892 | 27 |  |
| 34 | 7417630 | 4510 | 7691774 | 4631 |  | 7973374 | 9    |  | 8262925 | 4    | 26 |  |
| 35 | 7422140 | 2    | 7696405 | 3    |  | 7978133 | 4762 |  | 8267821 | 9    | 25 |  |
| 36 | 7426652 | 5    | 7701038 | 5    |  | 7982895 | 4    |  | 8272720 | 4901 | 24 |  |
| 37 | 7431167 | 7    | 7705673 | 7    |  | 7987659 | 6    |  | 8277621 | 3    | 23 |  |
| 38 | 7435684 | 9    | 7710310 | 9    |  | 7992425 | 8    |  | 8282524 | 5    | 22 |  |
| 39 | 7440203 | 4521 | 7714949 | 4641 |  | 7997193 | 4770 |  | 8287429 | 8    | 21 |  |
| 40 | 7444724 | 2    | 7719590 | 3    |  | 8001963 | 3    |  | 8292337 | 4910 | 20 |  |
| 41 | 7449246 | 4    | 7724233 | 5    |  | 8006736 | 5    |  | 8297247 | 3    | 19 |  |
| 42 | 7453770 | 6    | 7728878 | 7    |  | 8011511 | 7    |  | 8302160 | 5    | 18 |  |
| 43 | 7458296 | 8    | 7733525 | 4650 |  | 8016288 | 9    |  | 8307075 | 7    | 17 |  |
| 44 | 7462814 | 4530 | 7738175 | 2    |  | 8021067 | 4782 |  | 8311992 | 4920 | 16 |  |
| 45 | 7476354 | 2    | 7742827 | 4    |  | 8025849 | 4    |  | 8316912 | 2    | 15 |  |
| 46 | 7471886 | 4    | 7747481 | 6    |  | 8030633 | 6    |  | 8321834 | 5    | 14 |  |
| 47 | 7476420 | 6    | 7752137 | 8    |  | 8035419 | 8    |  | 8326759 | 7    | 13 |  |
| 48 | 7480956 | 8    | 7756795 | 4660 |  | 8040207 | 4790 |  | 8331686 | 9    | 12 |  |
| 49 | 7485494 | 9    | 7761455 | 2    |  | 8044997 | 3    |  | 8336615 | 4932 | 11 |  |
| 50 | 7490033 | 4541 | 7766117 | 4    |  | 8049790 | 5    |  | 8341547 | 4    | 10 |  |
| 51 | 7494574 | 3    | 7770781 | 6    |  | 8054585 | 7    |  | 8346481 | 7    | 9  |  |
| 52 | 7499117 | 6    | 7775447 | 9    |  | 8059382 | 9    |  | 8351418 | 9    | 8  |  |
| 53 | 7503663 | 8    | 7780116 | 4671 |  | 8064181 | 4802 |  | 8356357 | 4941 | 7  |  |
| 54 | 7508211 | 4550 | 7784787 | 3    |  | 8068983 | 4    |  | 8361298 | 4    | 6  |  |
| 55 | 7512761 | 2    | 7789460 | 5    |  | 8073787 | 6    |  | 8366242 | 6    | 5  |  |
| 56 | 7517313 | 4    | 7794135 | 7    |  | 8078593 | 8    |  | 8371188 | 8    | 4  |  |
| 57 | 7521867 | 6    | 7798812 | 9    |  | 8083401 | 4811 |  | 8376136 | 4951 | 3  |  |
| 58 | 7526423 | 8    | 7803491 | 4681 |  | 8088212 | 3    |  | 8381087 | 3    | 2  |  |
| 59 | 7530981 | 4560 | 7808172 | 4    |  | 8093025 | 5    |  | 8386040 | 6    | 1  |  |
| 60 | 7535541 |      | 7812856 |      |  | 8097840 |      |  | 8390996 |      | 0  |  |
| 53 |         |      | 52      |      |  | 51      |      |  | 50      |      |    |  |



# C A N O N

| 40 |         |      | 41      |      |         | 42   |         |      | 43 |  |  |
|----|---------|------|---------|------|---------|------|---------|------|----|--|--|
| 0  | 8390996 | 4958 | 8692867 | 5108 | 9004040 | 5268 | 9325151 | 5440 | 60 |  |  |
| 1  | 8395954 | 61   | 8697975 | 5110 | 9009308 | 5271 | 9330591 | 3    | 59 |  |  |
| 2  | 8400915 | 3    | 8703085 | 3    | 9014579 | 4    | 9336034 | 6    | 58 |  |  |
| 3  | 8405878 | 6    | 8708198 | 6    | 9019853 | 7    | 9341480 | 9    | 57 |  |  |
| 4  | 8410844 | 8    | 871334  | 9    | 9025130 | 5280 | 9346929 | 5452 | 56 |  |  |
| 5  | 8415812 | 4970 | 8718433 | 5122 | 9030410 | 3    | 9352381 | 4    | 55 |  |  |
| 6  | 8420782 | 2    | 8723555 | 4    | 9035693 | 5    | 9357835 | 7    | 54 |  |  |
| 7  | 8425754 | 5    | 8728679 | 7    | 9040978 | 8    | 9363292 | 5460 | 53 |  |  |
| 8  | 8430729 | 7    | 8733806 | 9    | 9046266 | 5291 | 9368752 | 3    | 52 |  |  |
| 9  | 8435706 | 4980 | 8738935 | 5132 | 9051557 | 3    | 9374215 | 7    | 51 |  |  |
| 10 | 8440686 | 2    | 8744067 | 4    | 9056850 | 6    | 9379682 | 5470 | 50 |  |  |
| 11 | 8445668 | 5    | 8749201 | 7    | 9062146 | 9    | 9385152 | 3    | 49 |  |  |
| 12 | 8450653 | 7    | 8754338 | 5140 | 9067445 | 5302 | 9390625 | 6    | 48 |  |  |
| 13 | 8455640 | 4990 | 8759478 | 2    | 9072747 | 5    | 9396101 | 9    | 47 |  |  |
| 14 | 8460630 | 2    | 8764620 | 4    | 9078052 | 8    | 9401580 | 5482 | 46 |  |  |
| 15 | 8465622 | 5    | 8769764 | 7    | 9083360 | 5310 | 9407062 | 5    | 45 |  |  |
| 16 | 8470617 | 7    | 8774911 | 5150 | 9088670 | 3    | 9412547 | 7    | 44 |  |  |
| 17 | 8475614 | 5000 | 8780061 | 3    | 9093983 | 6    | 9418034 | 5490 | 43 |  |  |
| 18 | 8480614 | 3    | 8785214 | 5    | 9099299 | 9    | 9423524 | 3    | 42 |  |  |
| 19 | 8485617 | 5    | 8790369 | 8    | 9104618 | 5322 | 9429017 | 6    | 41 |  |  |
| 20 | 8490622 | 7    | 8795527 | 5161 | 9109940 | 5    | 9434513 | 9    | 40 |  |  |
| 21 | 8495629 | 5010 | 8800688 | 3    | 9115265 | 8    | 9440012 | 5502 | 39 |  |  |
| 22 | 8500639 | 2    | 8805851 | 6    | 9120593 | 5330 | 9445514 | 5    | 38 |  |  |
| 23 | 8505651 | 5    | 8811017 | 9    | 9125923 | 3    | 9451019 | 9    | 37 |  |  |
| 24 | 8510666 | 7    | 8816186 | 5171 | 9131256 | 6    | 9456528 | 5512 | 36 |  |  |
| 25 | 8515683 | 5020 | 8821357 | 4    | 9136592 | 8    | 9462040 | 5    | 35 |  |  |
| 26 | 8520703 | 2    | 8826531 | 7    | 9141930 | 5341 | 9467555 | 9    | 34 |  |  |
| 27 | 8525725 | 5    | 8831708 | 9    | 9147271 | 4    | 9473073 | 5521 | 33 |  |  |
| 28 | 8530750 | 7    | 8836887 | 5182 | 9152615 | 7    | 9478594 | 4    | 32 |  |  |
| 29 | 8535777 | 9    | 8842069 | 4    | 9157962 | 5350 | 9484118 | 7    | 31 |  |  |
| 30 | 8540806 |      | 8847253 |      | 9163312 |      | 9489645 |      | 30 |  |  |
| 49 |         |      | 48      |      |         | 47   |         |      | 46 |  |  |



| 40 |         | 41   |         | 42   |         | 43   |         |    |
|----|---------|------|---------|------|---------|------|---------|----|
| 30 | 8540806 | 5032 | 8847253 | 5187 | 9163312 | 5353 | 9489645 | 30 |
| 31 | 8545838 | 4    | 8852440 | 5190 | 9168665 | 6    | 9495175 | 29 |
| 32 | 8550872 | 7    | 8857630 | 2    | 9174021 | 9    | 9400708 | 28 |
| 33 | 8555909 | 5040 | 8862822 | 5    | 9179380 | 5361 | 9506244 | 27 |
| 34 | 8560949 | 2    | 8868017 | 8    | 9184741 | 4    | 9511783 | 26 |
| 35 | 8565991 | 5    | 8873015 | 5200 | 9190105 | 7    | 9517325 | 25 |
| 36 | 8571036 | 7    | 8878415 | 3    | 9195472 | 5370 | 9522870 | 24 |
| 37 | 8576083 | 5050 | 8883628 | 6    | 9200842 | 3    | 9528419 | 23 |
| 38 | 8581133 | 2    | 8888824 | 9    | 9206215 | 5    | 9533971 | 22 |
| 39 | 8586185 | 4    | 8894033 | 5211 | 9211590 | 8    | 9539526 | 21 |
| 40 | 8591239 | 7    | 8899244 | 4    | 9216968 | 5381 | 9545084 | 20 |
| 41 | 8596296 | 9    | 8904458 | 7    | 9222349 | 4    | 9550645 | 19 |
| 42 | 8601355 | 5062 | 8909675 | 9    | 9227733 | 7    | 9556209 | 18 |
| 43 | 8606417 | 5    | 8914894 | 5222 | 9233120 | 5390 | 9561776 | 17 |
| 44 | 8611482 | 7    | 8920116 | 5    | 9238510 | 3    | 9567346 | 16 |
| 45 | 8616549 | 5070 | 8925341 | 7    | 9243903 | 6    | 9572919 | 15 |
| 46 | 8621619 | 3    | 8930568 | 5230 | 9249299 | 9    | 9578495 | 14 |
| 47 | 8626692 | 5    | 8935798 | 3    | 9254698 | 5402 | 9584074 | 13 |
| 48 | 8631767 | 8    | 8941031 | 6    | 9260100 | 5    | 9589656 | 12 |
| 49 | 8636845 | 5081 | 8946267 | 9    | 9265505 | 8    | 9595241 | 11 |
| 50 | 8641926 | 3    | 8951506 | 5241 | 9270913 | 4    | 9600830 | 10 |
| 51 | 8647009 | 6    | 8956747 | 4    | 9276324 | 5411 | 9606422 | 9  |
| 52 | 8652095 | 8    | 8961991 | 7    | 9281738 | 7    | 9612017 | 8  |
| 53 | 8657183 | 5090 | 8967238 | 9    | 9287155 | 9    | 9617615 | 7  |
| 54 | 8662273 | 3    | 8972487 | 5252 | 9292574 | 5422 | 9623216 | 6  |
| 55 | 8667366 | 5    | 8977739 | 5    | 9297996 | 5    | 9628820 | 5  |
| 56 | 8672461 | 8    | 8982994 | 8    | 9303421 | 8    | 9934427 | 4  |
| 57 | 8667559 | 5100 | 8988252 | 5260 | 9308849 | 5431 | 9640037 | 3  |
| 58 | 8682659 | 3    | 8993512 | 5    | 9314280 | 4    | 9645651 | 2  |
| 59 | 8687762 | 5    | 8998775 | 3    | 9319714 | 7    | 9651268 | 1  |
| 60 | 8692867 |      | 9004040 | 5    | 9325151 |      | 9656888 | 0  |
| 49 |         | 48   |         | 47   |         | 46   |         |    |



# C A N O N

| 44 |         |      | 45       |      |  | 46       |      |    |
|----|---------|------|----------|------|--|----------|------|----|
| 0  | 9656888 | 5623 | 10000000 | 5820 |  | 10355302 | 6030 | 60 |
| 1  | 9662511 | 6    | 10005820 | 3    |  | 10361332 | 3    | 59 |
| 2  | 9668137 | 9    | 10011643 | 6    |  | 10367365 | 7    | 58 |
| 3  | 9673766 | 5632 | 10017469 | 30   |  | 15373402 | 41   | 57 |
| 4  | 9679398 | 6    | 10023299 | 3    |  | 10379443 | 4    | 56 |
| 5  | 9685034 | 9    | 10029132 | 6    |  | 10385487 | 8    | 55 |
| 6  | 9690674 | 5642 | 10034968 | 40   |  | 10391535 | 52   | 54 |
| 7  | 9696315 | 5    | 10040808 | 3    |  | 10397587 | 6    | 53 |
| 8  | 9701960 | 9    | 10046651 | 6    |  | 10403643 | 9    | 52 |
| 9  | 9707609 | 5652 | 10052497 | 50   |  | 10409702 | 63   | 51 |
| 10 | 9713261 | 5    | 10058347 | 4    |  | 10415765 | 7    | 50 |
| 11 | 9718916 | 8    | 10064201 | 7    |  | 10421832 | 70   | 49 |
| 12 | 9724574 | 5661 | 10070058 | 60   |  | 10427902 | 4    | 48 |
| 13 | 9730235 | 5    | 10075918 | 4    |  | 10433976 | 8    | 47 |
| 14 | 9735900 | 8    | 10081782 | 7    |  | 10340054 | 81   | 46 |
| 15 | 9741568 | 5671 | 10087649 | 71   |  | 10446135 | 5    | 45 |
| 16 | 9747239 | 4    | 10093520 | 4    |  | 10452220 | 9    | 44 |
| 17 | 9752913 | 8    | 10099394 | 8    |  | 10458309 | 92   | 43 |
| 18 | 9758591 | 5681 | 10105272 | 81   |  | 10464401 | 6    | 42 |
| 19 | 9764272 | 4    | 10111153 | 5    |  | 10470497 | 6100 | 41 |
| 20 | 9769956 | 7    | 10117038 | 8    |  | 10476597 | 4    | 40 |
| 21 | 9775643 | 5691 | 10122926 | 92   |  | 10482701 | 7    | 39 |
| 22 | 9781334 | 4    | 10128818 | 5    |  | 10488808 | 11   | 38 |
| 23 | 9787028 | 7    | 10134713 | 8    |  | 10494919 | 5    | 37 |
| 24 | 9792725 | 5700 | 10140611 | 5902 |  | 10501034 | 9    | 36 |
| 25 | 9798425 | 3    | 10146513 | 5    |  | 10507153 | 22   | 35 |
| 26 | 9804128 | 7    | 10152418 | 9    |  | 10513275 | 5    | 34 |
| 27 | 9809835 | 5710 | 10158327 | 12   |  | 10519401 | 30   | 33 |
| 28 | 9815545 | 3    | 10164239 | 5    |  | 10505531 | 3    | 32 |
| 29 | 9821258 | 6    | 10170154 | 9    |  | 10531664 | 7    | 31 |
| 30 | 9826974 |      | 10176073 |      |  | 10537801 |      | 30 |
| 45 |         |      | 44       |      |  | 43       |      |    |



| 44 |          |      | 45       |      |          | 46   |    |  |
|----|----------|------|----------|------|----------|------|----|--|
| 30 | 9826974  | 5720 | 10176073 | 5923 | 10537801 | 6141 | 30 |  |
| 31 | 9832694  | 3    | 10181996 | 6    | 10543942 | 5    | 29 |  |
| 32 | 9838417  | 6    | 10187922 | 30   | 10550087 | 8    | 28 |  |
| 33 | 9844143  | 9    | 10193852 | 3    | 10556235 | 52   | 27 |  |
| 34 | 9849872  | 33   | 10199785 | 7    | 10562387 | 6    | 26 |  |
| 35 | 9855605  | 6    | 10205722 | 41   | 10568543 | 60   | 25 |  |
| 36 | 9861341  | 9    | 10211663 | 4    | 10574703 | 4    | 24 |  |
| 37 | 9867180  | 5742 | 10217607 | 8    | 10580867 | 7    | 23 |  |
| 38 | 9872922  | 6    | 10223555 | 51   | 10587034 | 71   | 22 |  |
| 39 | 9878668  | 9    | 10229506 | 4    | 10593205 | 5    | 21 |  |
| 40 | 9884317  | 53   | 10235460 | 8    | 10599180 | 9    | 20 |  |
| 41 | 9890070  | 6    | 10241418 | 62   | 10605559 | 83   | 19 |  |
| 42 | 9895826  | 9    | 10247380 | 5    | 10611742 | 7    | 18 |  |
| 43 | 9901585  | 62   | 10253345 | 9    | 10617929 | 90   | 17 |  |
| 44 | 9907347  | 6    | 10259314 | 72   | 10624119 | 4    | 16 |  |
| 45 | 9913113  | 9    | 10265286 | 6    | 10630313 | 8    | 15 |  |
| 46 | 9918882  | 72   | 10271262 | 80   | 10636511 | 6202 | 14 |  |
| 47 | 9924654  | 6    | 10277242 | 3    | 10642713 | 6    | 13 |  |
| 48 | 9930430  | 9    | 10283225 | 7    | 10648919 | 9    | 12 |  |
| 49 | 9936209  | 82   | 10289212 | 30   | 10655128 | 13   | 11 |  |
| 50 | 9941991  | 6    | 10295202 | 4    | 10661341 | 7    | 10 |  |
| 51 | 9947777  | 9    | 10301196 | 7    | 10667558 | 21   | 9  |  |
| 52 | 9953566  | 93   | 10307193 | 6001 | 10673779 | 5    | 8  |  |
| 53 | 9959359  | 6    | 10313194 | 5    | 10680004 | 9    | 7  |  |
| 54 | 9965155  | 9    | 10319199 | 8    | 10686233 | 33   | 6  |  |
| 55 | 9970954  | 5802 | 10325207 | 12   | 10692466 | 6    | 5  |  |
| 56 | 9976756  | 6    | 10331219 | 5    | 10698702 | 40   | 4  |  |
| 57 | 9982562  | 9    | 10337234 | 9    | 10704942 | 4    | 3  |  |
| 58 | 9988371  | 13   | 10343253 | 23   | 10711186 | 8    | 2  |  |
| 59 | 9994184  | 6    | 10349276 | 6    | 10717434 | 52   | 1  |  |
| 60 | 10000000 |      | 10355302 |      | 10723686 |      | 0  |  |
| 45 |          |      | 44       |      |          | 43   |    |  |



# C A N O N

| 47 |          |      | 48       |      |  | 49       |      |    |
|----|----------|------|----------|------|--|----------|------|----|
| 0  | 10723686 | 6256 | 11106124 | 6499 |  | 11503684 | 6760 | 60 |
| 1  | 10729942 | 60   | 11112623 | 6503 |  | 11510444 | 4    | 59 |
| 2  | 10736202 | 4    | 11119126 | 8    |  | 11517208 | 9    | 58 |
| 3  | 10742466 | 8    | 11125634 | 12   |  | 11523977 | 74   | 57 |
| 4  | 10748734 | 72   | 11132146 | 6    |  | 11530751 | 8    | 56 |
| 5  | 10755006 | 6    | 11138662 | 20   |  | 11537529 | 83   | 55 |
| 6  | 10761282 | 80   | 11145182 | 4    |  | 11544312 | 8    | 54 |
| 7  | 10767562 | 3    | 11151706 | 9    |  | 11551100 | 93   | 53 |
| 8  | 10773845 | 7    | 11158235 | 33   |  | 11557893 | 8    | 52 |
| 9  | 10780132 | 91   | 11164768 | 7    |  | 11564691 | 6803 | 51 |
| 10 | 10786423 | 5    | 11171305 | 41   |  | 11571494 | 7    | 50 |
| 11 | 10792718 | 9    | 11177846 | 6    |  | 11578301 | 11   | 49 |
| 12 | 10799017 | 6303 | 11184392 | 50   |  | 11585112 | 6    | 48 |
| 13 | 10805320 | 7    | 11190942 | 4    |  | 11591928 | 20   | 47 |
| 14 | 10811627 | 11   | 11197496 | 8    |  | 11698748 | 4    | 46 |
| 15 | 10817938 | 15   | 11204054 | 63   |  | 11605572 | 9    | 45 |
| 16 | 10824253 | 19   | 11210617 | 7    |  | 11612401 | 33   | 44 |
| 17 | 10830572 | 23   | 11217184 | 71   |  | 11619234 | 8    | 43 |
| 18 | 10836895 | 7    | 11223755 | 5    |  | 11626072 | 43   | 42 |
| 19 | 10843222 | 32   | 11230330 | 80   |  | 11632915 | 8    | 41 |
| 20 | 10849554 | 5    | 11236910 | 4    |  | 11639763 | 52   | 40 |
| 21 | 10855889 | 9    | 11243494 | 8    |  | 11646615 | 7    | 39 |
| 22 | 10862228 | 43   | 11250082 | 93   |  | 11653472 | 62   | 38 |
| 23 | 10868571 | 7    | 11256675 | 7    |  | 11660334 | 6    | 37 |
| 24 | 10874918 | 51   | 11263272 | 6600 |  | 11667200 | 71   | 36 |
| 25 | 10881269 | 5    | 11269873 | 5    |  | 11674071 | 6    | 35 |
| 26 | 10887624 | 9    | 11276478 | 10   |  | 11680947 | 80   | 34 |
| 27 | 10893983 | 63   | 11283088 | 4    |  | 11687827 | 5    | 33 |
| 28 | 10900346 | 7    | 11289702 | 9    |  | 11694712 | 90   | 32 |
| 29 | 10906713 | 71   | 11296321 | 23   |  | 11701602 | 5    | 31 |
| 30 | 10913084 |      | 11302944 |      |  | 11708497 |      | 30 |
| 42 |          |      | 41       |      |  | 40       |      |    |



| 47 |          |      | 48       |      |          | 49   |    |  |
|----|----------|------|----------|------|----------|------|----|--|
| 30 | 10913084 | 6375 | 11302944 | 6627 | 11708497 | 6899 | 30 |  |
| 31 | 10919459 | 9    | 11309571 | 32   | 11715396 | 6904 | 29 |  |
| 32 | 10925838 | 83   | 11316203 | 6    | 11722300 | 8    | 28 |  |
| 33 | 10932221 | 7    | 11322899 | 41   | 11729208 | 13   | 27 |  |
| 34 | 10938608 | 92   | 11329480 | 5    | 11736121 | 8    | 26 |  |
| 35 | 10945000 | 6    | 11336125 | 9    | 11743039 | 23   | 25 |  |
| 36 | 10951396 | 6400 | 11342774 | 54   | 11749962 | 7    | 24 |  |
| 37 | 10957796 | 4    | 11349428 | 8    | 10756989 | 32   | 23 |  |
| 38 | 10964200 | 8    | 11356086 | 62   | 11763821 | 8    | 22 |  |
| 39 | 10970608 | 12   | 11362748 | 7    | 11770758 | 42   | 21 |  |
| 40 | 10977020 | 6    | 11369415 | 71   | 11777700 | 6    | 20 |  |
| 41 | 10983436 | 20   | 11376086 | 6    | 11784646 | 51   | 19 |  |
| 42 | 10989856 | 4    | 11382761 | 80   | 11791597 | 6    | 18 |  |
| 43 | 10996280 | 8    | 11389442 | 4    | 11798553 | 61   | 17 |  |
| 44 | 11002708 | 32   | 11396126 | 9    | 11805514 | 5    | 16 |  |
| 45 | 11009140 | 7    | 11402815 | 93   | 11812479 | 70   | 15 |  |
| 46 | 11015577 | 41   | 11409508 | 8    | 11819449 | 5    | 14 |  |
| 47 | 11022028 | 5    | 11416206 | 6702 | 11826424 | 80   | 13 |  |
| 48 | 11028463 | 9    | 11422908 | 7    | 11833404 | 4    | 12 |  |
| 49 | 11034912 | 53   | 11429615 | 11   | 11840388 | 9    | 11 |  |
| 50 | 11041365 | 7    | 11436326 | 6    | 11847377 | 94   | 10 |  |
| 51 | 11047822 | 61   | 11443042 | 20   | 11854371 | 9    | 9  |  |
| 52 | 11054283 | 5    | 11449762 | 5    | 11861370 | 7004 | 8  |  |
| 53 | 11060748 | 70   | 11456487 | 9    | 11868374 | 9    | 7  |  |
| 54 | 11067218 | 4    | 11463216 | 74   | 11875383 | 14   | 6  |  |
| 55 | 11073692 | 8    | 11469950 | 8    | 11882397 | 8    | 5  |  |
| 56 | 11080170 | 82   | 11476688 | 43   | 11889417 | 23   | 4  |  |
| 57 | 11086652 | 6    | 11483431 | 7    | 11896438 | 8    | 3  |  |
| 58 | 11093138 | 91   | 11490178 | 51   | 11903466 | 33   | 2  |  |
| 59 | 11099629 | 5    | 11496929 | 5    | 11910499 | 8    | 1  |  |
| 60 | 11106124 |      | 11503684 |      | 11917537 |      | 0  |  |
| 42 |          |      | 41       |      |          | 40   |    |  |



# CANON

| 50 |          |      | 51       |      |  | 52       |      |    |
|----|----------|------|----------|------|--|----------|------|----|
| 0  | 11917537 | 7043 | 12348972 | 7348 |  | 12799416 | 7677 | 60 |
| 1  | 11924580 | 8    | 12356320 | 53   |  | 12807093 | 83   | 59 |
| 2  | 11931628 | 52   | 12363673 | 8    |  | 12814776 | 9    | 58 |
| 3  | 11938680 | 7    | 12371031 | 63   |  | 12822465 | 94   | 57 |
| 4  | 11945737 | 62   | 12378394 | 8    |  | 12830159 |      | 56 |
| 5  | 11952799 | 7    | 12385762 | 74   |  | 12837859 | 7700 | 55 |
| 6  | 11959866 | 72   | 12393136 | 9    |  | 12845565 | 12   | 54 |
| 7  | 11966938 | 7    | 12400515 | 84   |  | 12853277 | 7    | 53 |
| 8  | 11974015 | 82   | 12407999 | 9    |  | 12860994 | 23   | 52 |
| 9  | 11981097 | 6    | 12415288 | 95   |  | 12868717 | 8    | 51 |
| 10 | 11988183 | 91   | 12422683 | 7400 |  | 12876445 | 34   | 50 |
| 11 | 11995274 | 7    | 12430083 | 6    |  | 12884179 | 40   | 49 |
| 12 | 12002370 | 7101 | 12437489 | 11   |  | 12891919 | 6    | 48 |
| 13 | 12009471 | 7    | 12444900 | 7    |  | 12899665 | 52   | 47 |
| 14 | 12016578 | 12   | 12452317 | 22   |  | 12907417 | 8    | 46 |
| 15 | 12023690 | 7    | 12459739 | 8    |  | 12915175 | 64   | 45 |
| 16 | 12030807 | 22   | 12467167 | 33   |  | 12922939 | 70   | 44 |
| 17 | 12037929 | 7    | 12474600 | 9    |  | 12930709 | 6    | 43 |
| 18 | 12045056 | 32   | 12482039 | 45   |  | 12938485 | 82   | 42 |
| 19 | 12052188 | 7    | 12489484 | 50   |  | 12946267 | 8    | 41 |
| 20 | 12059325 | 42   | 12496934 | 5    |  | 12954055 | 93   | 40 |
| 21 | 12066467 | 7    | 12504389 | 61   |  | 12961848 | 9    | 39 |
| 22 | 12073614 | 52   | 12511850 | 6    |  | 12969647 | 7805 | 38 |
| 23 | 12080766 | 7    | 12519316 | 71   |  | 12977457 | 11   | 37 |
| 24 | 12087923 | 62   | 12526787 | 7    |  | 12985263 | 7    | 36 |
| 25 | 12095085 | 7    | 12534264 | 82   |  | 12993080 | 23   | 35 |
| 26 | 12102252 | 72   | 12541746 | 7    |  | 13000903 | 9    | 34 |
| 27 | 12109424 | 7    | 12549233 | 92   |  | 13008732 | 35   | 33 |
| 28 | 12116601 | 82   | 12556725 | 7    |  | 13016567 | 40   | 32 |
| 29 | 12123783 | 7    | 12564222 | 7502 |  | 13024407 | 6    | 31 |
| 30 | 12130970 |      | 12571724 |      |  | 13032253 |      | 30 |
| 39 |          |      | 38       |      |  | 37       |      |    |



| 50 |          |      | 51       |      |          | 52   |    |  |
|----|----------|------|----------|------|----------|------|----|--|
| 30 | 12130970 | 7192 | 12571724 | 7508 | 13032253 | 7852 | 30 |  |
| 31 | 12138162 | 7    | 12579232 | 14   | 13040105 | 58   | 29 |  |
| 32 | 12145359 | 7202 | 12586746 | 19   | 13047963 | 64   | 28 |  |
| 33 | 12152561 | 7    | 12594265 | 25   | 13055827 | 70   | 27 |  |
| 34 | 12159768 | 13   | 12601790 | 31   | 13063697 | 76   | 26 |  |
| 35 | 12166981 | 8    | 12609321 | 37   | 13071573 | 82   | 25 |  |
| 36 | 12174199 | 23   | 12616858 | 42   | 13079455 | 88   | 24 |  |
| 37 | 12181422 | 8    | 12624400 | 48   | 13087343 | 94   | 23 |  |
| 38 | 12188650 | 33   | 12631948 | 53   | 13095237 | 7901 | 22 |  |
| 39 | 12195883 | 8    | 12639501 | 59   | 13103138 | 7    | 21 |  |
| 40 | 12203121 | 43   | 12647060 | 64   | 13111045 | 13   | 20 |  |
| 41 | 12210364 | 9    | 12654624 | 70   | 13118958 | 19   | 19 |  |
| 42 | 12217613 | 54   | 12662194 | 75   | 13126877 | 25   | 18 |  |
| 43 | 12224867 | 9    | 12669769 | 81   | 13134802 | 30   | 17 |  |
| 44 | 12232126 | 64   | 12677350 | 87   | 13142732 | 36   | 16 |  |
| 45 | 12239390 | 9    | 12684937 | 93   | 13150668 | 42   | 15 |  |
| 46 | 12246659 | 74   | 12692530 | 98   | 13158610 | 48   | 14 |  |
| 47 | 12253933 | 9    | 12700128 | 7604 | 13166558 | 54   | 13 |  |
| 48 | 12261212 | 84   | 12707732 | 9    | 13174512 | 60   | 12 |  |
| 49 | 12268496 | 90   | 12715341 | 15   | 13182472 | 66   | 11 |  |
| 50 | 12275786 | 5    | 12722956 | 21   | 13190438 | 73   | 10 |  |
| 51 | 12283081 | 3700 | 12730577 | 26   | 13198411 | 79   | 9  |  |
| 52 | 12290381 | 6    | 12738203 | 32   | 13206390 | 85   | 8  |  |
| 53 | 12297687 | 11   | 12745835 | 38   | 13214375 | 92   | 7  |  |
| 54 | 12304998 | 6    | 12753473 | 43   | 13222367 | 98   | 6  |  |
| 55 | 12312314 | 21   | 12761116 | 49   | 13230365 | 8004 | 5  |  |
| 56 | 12319635 | 6    | 12768765 | 55   | 13238369 | 10   | 4  |  |
| 57 | 12326961 | 32   | 12776420 | 60   | 13246379 | 17   | 3  |  |
| 58 | 12334293 | 7    | 12784080 | 65   | 13254396 | 23   | 2  |  |
| 59 | 12341630 | 42   | 12791745 | 71   | 13262419 | 29   | 1  |  |
| 60 | 12348972 |      | 12799416 |      | 13270448 |      | 0  |  |
| 39 |          |      | 38       |      |          | 37   |    |  |



# CANON

| 53 |          |      | 54       |      |  | 55       |      |    |
|----|----------|------|----------|------|--|----------|------|----|
| 0  | 13270448 | 8035 | 13763820 | 8423 |  | 14281480 | 9306 | 60 |
| 1  | 13278483 | 41   | 13772243 | 30   |  | 14290325 | 14   | 59 |
| 2  | 13286524 | 47   | 13780673 | 36   |  | 14299177 | 23   | 58 |
| 3  | 13294571 | 53   | 13789109 | 43   |  | 14308037 | 31   | 57 |
| 4  | 13302624 | 59   | 13797552 | 50   |  | 14316905 | 39   | 56 |
| 5  | 13310683 | 66   | 13806002 | 57   |  | 14325780 | 47   | 55 |
| 6  | 13318749 | 72   | 13814459 | 63   |  | 14334662 | 55   | 54 |
| 7  | 13326821 | 78   | 13822922 | 70   |  | 14343552 | 63   | 53 |
| 8  | 13334899 | 85   | 13831392 | 77   |  | 14352449 | 71   | 52 |
| 9  | 13342984 | 91   | 13839869 | 83   |  | 14361354 | 79   | 51 |
| 10 | 13351075 | 97   | 13848352 | 90   |  | 14370266 | 88   | 50 |
| 11 | 13359172 | 104  | 13856842 | 97   |  | 14379186 | 96   | 49 |
| 12 | 13367276 | 110  | 13865339 | 104  |  | 14388113 | 104  | 48 |
| 13 | 13375386 | 116  | 13873843 | 111  |  | 14397048 | 112  | 47 |
| 14 | 13383502 | 122  | 13882354 | 118  |  | 14405990 | 120  | 46 |
| 15 | 13391624 | 129  | 13890872 | 125  |  | 14414939 | 128  | 45 |
| 16 | 13399752 | 135  | 13899397 | 133  |  | 14423896 | 137  | 44 |
| 17 | 13407888 | 141  | 13907930 | 140  |  | 14432861 | 145  | 43 |
| 18 | 13416029 | 148  | 13916470 | 147  |  | 14441833 | 153  | 42 |
| 19 | 13424177 | 154  | 13925017 | 154  |  | 14450812 | 162  | 41 |
| 20 | 13432331 | 161  | 13933571 | 160  |  | 14459799 | 170  | 40 |
| 21 | 13440492 | 167  | 13942131 | 167  |  | 14468794 | 178  | 39 |
| 22 | 13448659 | 173  | 13950698 | 174  |  | 14477797 | 186  | 38 |
| 23 | 13456832 | 179  | 13959272 | 181  |  | 14486807 | 194  | 37 |
| 24 | 13465011 | 186  | 13967853 | 188  |  | 14495825 | 203  | 36 |
| 25 | 13473197 | 193  | 13976441 | 194  |  | 14504850 | 211  | 35 |
| 26 | 13481390 | 199  | 13985035 | 201  |  | 14513883 | 219  | 34 |
| 27 | 13489589 | 205  | 13993636 | 208  |  | 14522924 | 227  | 33 |
| 28 | 13497794 | 212  | 14002244 | 215  |  | 14531972 | 236  | 32 |
| 29 | 13506006 | 218  | 14010859 | 222  |  | 14541028 | 244  | 31 |
| 30 | 13514224 |      | 14019481 |      |  | 14550091 |      | 30 |
| 36 |          |      | 35       |      |  | 34       |      |    |



| 53 |          |      | 54       |      |          | 55   |    |  |
|----|----------|------|----------|------|----------|------|----|--|
| 30 | 13514224 | 8225 | 14019481 | 8629 | 14550091 | 9071 | 30 |  |
| 31 | 13522449 | 31   | 14028110 |      | 14559162 |      | 29 |  |
| 32 | 13530680 | 38   | 14036746 | 36   | 14568241 | 79   | 28 |  |
| 33 | 13538918 |      | 14045389 | 43   | 14577327 | 86   | 27 |  |
| 34 | 13547162 | 44   | 14054040 | 51   | 14586421 | 94   | 26 |  |
| 35 | 13555413 | 51   | 14062698 | 58   | 14595523 | 9102 | 25 |  |
| 36 | 13563670 | 57   | 14071363 | 65   | 14604633 | 9110 | 24 |  |
| 37 | 13571834 | 64   | 14080035 | 72   | 14613750 | 17   | 23 |  |
| 38 | 13580104 | 70   | 14088715 | 80   | 14622875 | 25   | 22 |  |
| 39 | 13588381 | 77   | 14097402 | 87   | 14632007 | 32   | 21 |  |
| 40 | 13596764 | 83   | 14106097 | 95   | 14641146 | 39   | 20 |  |
| 41 | 13605054 | 90   | 14114798 | 8701 | 14650293 | 47   | 19 |  |
| 42 | 13613350 | 96   | 14123506 | 8    | 14659449 | 56   | 18 |  |
| 43 | 13621653 | 8303 | 14132221 | 15   | 14668613 | 64   | 17 |  |
| 44 | 13629963 | 10   | 14140923 | 22   | 14677785 | 72   | 16 |  |
| 45 | 13638279 | 16   | 14149672 | 29   | 14686965 | 80   | 15 |  |
| 46 | 13646602 | 23   | 14158409 | 37   | 14696153 | 88   | 14 |  |
| 47 | 13654932 | 30   | 14167153 | 44   | 14705349 | 96   | 13 |  |
| 48 | 13663268 | 36   | 14175904 | 51   | 14714553 | 9204 | 12 |  |
| 49 | 13671610 | 42   | 14184663 | 59   | 14723765 | 12   |    |  |
| 50 | 13679959 | 49   | 14193429 | 66   | 14732985 | 20   | 11 |  |
| 51 | 13688315 | 56   | 14202202 | 73   | 14742212 | 27   | 10 |  |
| 52 | 13696677 | 62   | 14210982 | 80   | 14751447 | 35   | 9  |  |
| 53 | 13705046 | 69   | 14219769 | 87   | 14760690 | 43   | 8  |  |
| 54 | 13713422 | 76   | 14228563 | 94   | 14769941 | 51   | 7  |  |
| 55 | 13721805 | 83   | 14237365 | 8802 | 14779200 | 59   | 6  |  |
| 56 | 13730194 | 89   | 14246174 | 9    | 14788466 | 66   | 5  |  |
| 57 | 13738590 | 96   | 14254990 | 16   | 14797740 | 74   | 4  |  |
| 58 | 13746993 | 8403 | 14263813 | 23   | 14807022 | 82   | 3  |  |
| 59 | 13755403 | 10   | 14272643 | 30   | 14816312 | 90   | 2  |  |
| 60 | 13763820 | 17   | 14281480 | 37   | 14825610 | 98   | 1  |  |
|    |          |      |          |      |          |      | 0  |  |
| 36 |          |      | 35       |      |          | 34   |    |  |



| 56 |          |      | 57       |       |  | 58       |       |    |
|----|----------|------|----------|-------|--|----------|-------|----|
| 0  | 14825610 | 9306 | 15398651 | 9810  |  | 16003347 | 10363 | 60 |
| 1  | 14834916 | 14   | 15408461 | 19    |  | 16013710 | 73    | 59 |
| 2  | 14844230 | 23   | 15418280 | 28    |  | 16024083 | 83    | 58 |
| 3  | 14853553 | 31   | 15428108 | 37    |  | 16034466 | 93    | 57 |
| 4  | 14862884 | 39   | 15437945 | 46    |  | 16044859 | 10402 | 56 |
| 5  | 14872223 | 47   | 15447791 | 55    |  | 16055261 | 12    | 55 |
| 6  | 14881570 | 55   | 15457646 | 64    |  | 16065673 | 22    | 54 |
| 7  | 14890925 | 63   | 15467510 | 72    |  | 16076095 | 32    | 53 |
| 8  | 14909288 | 71   | 15477382 | 81    |  | 16086527 | 41    | 52 |
| 9  | 14909659 | 79   | 15487263 | 90    |  | 16096968 | 51    | 51 |
| 10 | 14919038 | 88   | 15497153 | 99    |  | 16107419 | 61    | 50 |
| 11 | 14928426 | 96   | 15507052 | 9908  |  | 16117880 | 71    | 49 |
| 12 | 14937822 | 9404 | 15516960 | 17    |  | 16128351 | 81    | 48 |
| 13 | 14947226 | 12   | 15526877 | 26    |  | 16138832 | 90    | 47 |
| 14 | 14956638 | 20   | 15536803 | 35    |  | 16149322 | 10500 | 46 |
| 15 | 14966058 | 28   | 15546738 | 44    |  | 16159822 | 10    | 45 |
| 16 | 14975486 | 37   | 15556682 | 54    |  | 16170332 | 20    | 44 |
| 17 | 14984923 | 45   | 15566636 | 63    |  | 16180852 | 29    | 43 |
| 18 | 14994368 | 53   | 15576599 | 72    |  | 16191381 | 39    | 42 |
| 19 | 15003821 | 62   | 15586571 | 81    |  | 16201920 | 49    | 41 |
| 20 | 15013283 | 70   | 15596552 | 90    |  | 16212469 | 59    | 40 |
| 21 | 15022753 | 78   | 15606542 | 99    |  | 16223028 | 69    | 39 |
| 22 | 15032231 | 86   | 15616541 | 10008 |  | 16233597 | 79    | 38 |
| 23 | 15041717 | 94   | 15626549 | 17    |  | 16244176 | 90    | 37 |
| 24 | 15051211 | 9503 | 15636566 | 26    |  | 16254766 | 10600 | 36 |
| 25 | 15060714 | 11   | 15646592 | 35    |  | 16265366 | 10    | 35 |
| 26 | 15070225 | 19   | 15656627 | 44    |  | 16275976 | 20    | 34 |
| 27 | 15079744 | 27   | 15666671 | 53    |  | 16286596 | 30    | 33 |
| 28 | 15089271 | 36   | 15676724 | 62    |  | 16297226 | 40    | 32 |
| 29 | 15078807 | 44   | 15686786 | 71    |  | 16307866 | 50    | 31 |
| 30 | 15108351 |      | 15696857 |       |  | 16318516 |       | 30 |
| 33 |          |      | 32       |       |  | 31       |       |    |



| 56 |          |      | 57       |       |          | 58    |    |  |
|----|----------|------|----------|-------|----------|-------|----|--|
| 30 | 15108351 | 9552 | 15696857 | 10081 | 16318516 | 10660 | 30 |  |
| 31 | 15117903 | 61   | 15706938 | 90    | 16329176 | 71    | 29 |  |
| 32 | 15127464 | 70   | 15717028 | 99    | 16339847 | 81    | 28 |  |
| 33 | 15137034 | 78   | 15727127 | 10108 | 16350528 | 91    | 27 |  |
| 34 | 15146612 | 87   | 15737235 | 18    | 16361219 | 10701 | 26 |  |
| 35 | 15156199 | 95   | 15747353 | 27    | 16371920 | 11    | 25 |  |
| 36 | 15165794 | 9604 | 15757480 | 36    | 16382631 | 21    | 24 |  |
| 37 | 15175398 | 13   | 15767616 | 45    | 16393352 | 31    | 23 |  |
| 38 | 15185011 | 21   | 15777761 | 54    | 16404083 | 41    | 22 |  |
| 39 | 15194632 | 29   | 15787915 | 63    | 16414824 | 51    | 21 |  |
| 40 | 15204261 | 38   | 15798078 | 73    | 16425575 | 62    | 20 |  |
| 41 | 15213899 | 46   | 15808251 | 82    | 16436337 | 72    | 19 |  |
| 42 | 15223545 | 55   | 15818433 | 92    | 16447109 | 83    | 18 |  |
| 43 | 15233200 | 63   | 15828625 | 10202 | 16457892 | 10793 | 17 |  |
| 44 | 15242863 | 72   | 15838827 | 11    | 16468685 | 10803 | 16 |  |
| 45 | 15252535 | 81   | 15849038 | 21    | 16479488 | 14    | 15 |  |
| 46 | 15262216 | 89   | 15859259 | 30    | 16490302 | 24    | 14 |  |
| 47 | 15271905 | 98   | 15869489 | 40    | 16501126 | 34    | 13 |  |
| 48 | 15281603 | 9706 | 15879729 | 50    | 16511960 | 45    | 12 |  |
| 49 | 15291309 | 15   | 15889979 | 59    | 16522805 | 55    | 11 |  |
| 50 | 15301024 | 24   | 15900228 | 69    | 16533660 | 66    | 10 |  |
| 51 | 15310748 | 33   | 15910507 | 78    | 16544526 | 76    | 9  |  |
| 52 | 15320481 | 41   | 15920785 | 88    | 16555402 | 87    | 8  |  |
| 53 | 15330222 | 50   | 15931073 | 97    | 16566289 | 97    | 7  |  |
| 54 | 15339972 | 58   | 15941370 | 10306 | 16577186 | 10908 | 6  |  |
| 55 | 15349730 | 67   | 15951676 | 16    | 16588094 | 19    | 5  |  |
| 56 | 15359497 | 76   | 15961992 | 25    | 16599013 | 29    | 4  |  |
| 57 | 15369273 | 84   | 15972317 | 34    | 16609942 | 40    | 3  |  |
| 58 | 15379057 | 93   | 15982651 | 43    | 16620882 | 51    | 2  |  |
| 59 | 15388850 | 9801 | 15992994 | 53    | 16631833 | 6     | 1  |  |
| 60 | 15398651 |      | 16003247 |       | 16642794 |       | 0  |  |
| 33 |          |      | 32       |       |          | 31    |    |  |



# C A N O N

| 59 |          |       | 60       |       |          | 61    |    |  |  |
|----|----------|-------|----------|-------|----------|-------|----|--|--|
| 0  | 16642794 | 10972 | 17320508 | 11642 | 18040478 | 12382 | 60 |  |  |
| 1  | 16653766 | 83    | 17332150 | 54    | 18052860 | 95    | 59 |  |  |
| 2  | 16664749 | 93    | 17343804 | 65    | 18065255 | 12408 | 58 |  |  |
| 3  | 16675742 | 11004 | 17355469 | 77    | 18077663 | 21    | 57 |  |  |
| 4  | 16686746 | 14    | 17367146 | 88    | 18090084 | 34    | 56 |  |  |
| 5  | 16697760 | 25    | 17378834 | 11700 | 18102518 | 48    | 55 |  |  |
| 6  | 16708785 | 35    | 17390534 | 12    | 18114966 | 61    | 54 |  |  |
| 7  | 16719820 | 46    | 17402246 | 23    | 18127427 | 74    | 53 |  |  |
| 8  | 16730866 | 56    | 17413969 | 35    | 18139901 | 87    | 52 |  |  |
| 9  | 16741922 | 67    | 17425704 | 47    | 18152388 | 12501 | 51 |  |  |
| 10 | 16752989 | 78    | 17437451 | 59    | 18164889 | 14    | 50 |  |  |
| 11 | 16764067 | 89    | 17449210 | 71    | 18177403 | 27    | 49 |  |  |
| 12 | 16775156 | 11100 | 17460981 | 83    | 18189930 | 40    | 48 |  |  |
| 13 | 16786256 | 11    | 17472764 | 95    | 18202470 | 54    | 47 |  |  |
| 14 | 16797367 | 22    | 17484559 | 11807 | 18215024 | 67    | 46 |  |  |
| 15 | 16808489 | 32    | 17496366 | 19    | 18227591 | 80    | 45 |  |  |
| 16 | 16819621 | 43    | 17508185 | 31    | 18240171 | 90    | 44 |  |  |
| 17 | 16830764 | 54    | 17520026 | 43    | 18252765 | 12607 | 43 |  |  |
| 18 | 16841918 | 65    | 17531869 | 55    | 18265372 | 20    | 42 |  |  |
| 19 | 16853083 | 76    | 17543724 | 67    | 18277991 | 34    | 41 |  |  |
| 20 | 16864259 | 87    | 17555591 | 79    | 18290626 | 47    | 40 |  |  |
| 21 | 16875446 | 98    | 17567470 | 92    | 18303273 | 61    | 39 |  |  |
| 22 | 16886644 | 11209 | 17579362 | 11904 | 18315934 | 74    | 38 |  |  |
| 23 | 16897853 | 21    | 17591266 | 16    | 18328608 | 88    | 37 |  |  |
| 24 | 16909074 | 32    | 17603182 | 29    | 18341296 | 12701 | 36 |  |  |
| 25 | 16920306 | 43    | 17615111 | 41    | 18353997 | 15    | 35 |  |  |
| 26 | 16931549 | 54    | 17627052 | 54    | 18366712 | 28    | 34 |  |  |
| 27 | 16942803 | 65    | 17639006 | 66    | 18379440 | 42    | 33 |  |  |
| 28 | 16954068 | 76    | 17650972 | 79    | 18392182 | 56    | 32 |  |  |
| 29 | 16965344 | 87    | 17662951 | 91    | 18404938 | 69    | 31 |  |  |
| 30 | 16976631 |       | 17674941 |       | 18417707 |       | 30 |  |  |
| 30 |          |       | 29       |       |          | 28    |    |  |  |



| 59 |          | 60    |          | 61    |          |    |
|----|----------|-------|----------|-------|----------|----|
| 30 | 16976631 | 11298 | 17674942 | 12003 | 18417707 | 30 |
| 31 | 16987929 | 11310 | 17686945 | 15    | 18430490 | 29 |
| 32 | 16999239 | 21    | 17698960 | 27    | 18443287 | 28 |
| 33 | 17010560 | 32    | 17710987 | 40    | 18456098 | 27 |
| 34 | 17021892 | 44    | 17723027 | 52    | 18468922 | 26 |
| 35 | 17033236 | 55    | 17735079 | 64    | 18481760 | 25 |
| 36 | 17044591 | 66    | 17747143 | 77    | 18494612 | 24 |
| 37 | 17055957 | 78    | 17759220 | 89    | 18507478 | 23 |
| 38 | 17067325 | 89    | 17771309 | 12101 | 18520357 | 22 |
| 39 | 17078714 | 11401 | 17783410 | 13    | 18533250 | 21 |
| 40 | 17090115 | 12    | 17795524 | 27    | 18546157 | 20 |
| 41 | 17101527 | 23    | 17808651 | 39    | 18559078 | 19 |
| 42 | 17112950 | 34    | 17819790 | 52    | 18572013 | 18 |
| 43 | 17124384 | 45    | 17831942 | 65    | 18584962 | 17 |
| 44 | 17135829 | 56    | 17844107 | 78    | 18597925 | 16 |
| 45 | 17147285 | 67    | 17856285 | 90    | 18610902 | 15 |
| 46 | 17158752 | 79    | 17868475 | 12203 | 18623894 | 14 |
| 47 | 17170231 | 90    | 17880678 | 16    | 18636900 | 13 |
| 48 | 17181721 | 11501 | 17892894 | 29    | 18649920 | 12 |
| 49 | 17193222 | 12    | 17905123 | 41    | 18662954 | 11 |
| 50 | 17204734 | 24    | 17917364 | 54    | 18676002 | 10 |
| 51 | 17216258 | 36    | 17929618 | 67    | 18689064 | 9  |
| 52 | 17227794 | 48    | 17941885 | 79    | 18702140 | 8  |
| 53 | 17239342 | 60    | 17954164 | 92    | 18715231 | 7  |
| 54 | 17250902 | 71    | 17966456 | 12305 | 18728335 | 6  |
| 55 | 17262473 | 83    | 17978761 | 18    | 18741454 | 5  |
| 56 | 17274056 | 95    | 17991079 | 31    | 18754587 | 4  |
| 57 | 17285651 | 11607 | 18003410 | 43    | 18767735 | 3  |
| 58 | 17297258 | 19    | 18015753 | 56    | 18780897 | 2  |
| 59 | 17308877 | 31    | 18028109 | 69    | 18794074 | 1  |
| 60 | 17320508 |       | 18040478 |       | 18807265 | 0  |
| 30 |          | 29    |          | 28    |          |    |



| 62 |          |       | 63       |       |          | 64    |    |  |
|----|----------|-------|----------|-------|----------|-------|----|--|
| 0  | 18807265 | 13206 | 19626104 | 14121 | 20503034 | 15146 | 60 |  |
| 1  | 18820471 | 20    | 19640225 | 37    | 20518180 | 15164 | 59 |  |
| 2  | 18833691 | 34    | 19654362 | 54    | 20533344 | 15182 | 58 |  |
| 3  | 18846925 | 49    | 19668516 | 70    | 20548526 | 15200 | 57 |  |
| 4  | 18860174 | 63    | 19682686 | 86    | 20563726 | 19    | 56 |  |
| 5  | 18873437 | 78    | 19696872 | 14202 | 20578945 | 37    | 55 |  |
| 6  | 18886715 | 92    | 19711074 | 19    | 20594182 | 55    | 54 |  |
| 7  | 18900007 | 13307 | 19725293 | 35    | 20609437 | 74    | 53 |  |
| 8  | 18913314 | 22    | 19739528 | 52    | 20624711 | 92    | 52 |  |
| 9  | 18926636 | 36    | 19753780 | 68    | 20640003 | 15310 | 51 |  |
| 10 | 18939972 | 51    | 19768048 | 85    | 20655313 | 29    | 50 |  |
| 11 | 18953323 | 66    | 19782333 | 14301 | 20670642 | 47    | 49 |  |
| 12 | 18966689 | 81    | 19796634 | 17    | 20685989 | 66    | 48 |  |
| 13 | 18980070 | 96    | 19810951 | 34    | 20701355 | 84    | 47 |  |
| 14 | 18993466 | 13410 | 19825285 | 50    | 20716739 | 15403 | 46 |  |
| 15 | 19006876 | 25    | 19839635 | 67    | 20732142 | 22    | 45 |  |
| 16 | 19020301 | 40    | 19854002 | 84    | 20747564 | 40    | 44 |  |
| 17 | 19033741 | 55    | 19868386 | 14400 | 20763004 | 59    | 43 |  |
| 18 | 19047196 | 69    | 19882786 | 17    | 20778463 | 78    | 42 |  |
| 19 | 19060665 | 84    | 19897203 | 34    | 20793941 | 97    | 41 |  |
| 20 | 19074149 | 99    | 19911637 | 51    | 20809438 | 15515 | 40 |  |
| 21 | 19087648 | 13514 | 19926088 | 67    | 20824953 | 34    | 39 |  |
| 22 | 19101162 | 29    | 19940555 | 84    | 20840487 | 53    | 38 |  |
| 23 | 19114691 | 44    | 19955039 | 14501 | 20856040 | 72    | 37 |  |
| 24 | 19128235 | 60    | 19969540 | 17    | 20871612 | 90    | 36 |  |
| 25 | 19141795 | 75    | 19984057 | 34    | 20887202 | 15609 | 35 |  |
| 26 | 19155370 | 90    | 19998591 | 51    | 20902811 | 28    | 34 |  |
| 27 | 19168960 | 13605 | 20013142 | 67    | 20918439 | 47    | 33 |  |
| 28 | 19182565 | 20    | 20027709 | 84    | 20934086 | 66    | 32 |  |
| 29 | 19196185 | 36    | 20042297 | 14601 | 20949752 | 84    | 31 |  |
| 30 | 19209821 |       | 20056898 |       | 20965436 |       | 30 |  |
| 27 |          |       | 26       |       |          | 25    |    |  |



| 62 |          |       | 63       |       |          | 64    |    |  |
|----|----------|-------|----------|-------|----------|-------|----|--|
| 30 | 19209821 | 13651 | 20056898 | 14618 | 20965436 | 15704 | 30 |  |
| 31 | 19223472 | 66    | 30071516 | 36    | 20981140 | 23    | 29 |  |
| 32 | 19237138 | 81    | 20086152 | 53    | 20996863 | 42    | 28 |  |
| 33 | 19250819 | 97    | 20100805 | 70    | 21012605 | 62    | 27 |  |
| 34 | 19264516 | 13712 | 10115475 | 88    | 21028367 | 81    | 26 |  |
| 35 | 19278228 | 27    | 20130163 | 14705 | 21044148 | 15801 | 25 |  |
| 36 | 19291955 | 43    | 20144868 | 22    | 21059949 | 20    | 24 |  |
| 37 | 19305698 | 58    | 20159590 | 39    | 21075769 | 40    | 23 |  |
| 38 | 19319456 | 74    | 20174329 | 57    | 21091609 | 59    | 22 |  |
| 39 | 19333230 | 89    | 20189086 | 74    | 21107468 | 79    | 21 |  |
| 40 | 19347019 | 13805 | 20203860 | 91    | 21123347 | 99    | 20 |  |
| 41 | 19360824 | 20    | 20218651 | 14809 | 21139246 | 15918 | 19 |  |
| 42 | 19374644 | 36    | 20233460 | 26    | 21155164 | 38    | 18 |  |
| 43 | 19388480 | 51    | 20248286 | 44    | 21171102 | 57    | 17 |  |
| 44 | 19402331 | 67    | 20263130 | 61    | 21187059 | 77    | 16 |  |
| 45 | 19416198 | 83    | 20277991 | 79    | 21203036 | 96    | 15 |  |
| 46 | 19430081 | 99    | 20292870 | 97    | 21219032 | 16016 | 14 |  |
| 47 | 19443980 | 13914 | 20307767 | 14914 | 21235048 | 35    | 13 |  |
| 48 | 19457894 | 30    | 20322681 | 32    | 21251083 | 55    | 12 |  |
| 49 | 19471824 | 46    | 20337613 | 50    | 21267138 | 75    | 11 |  |
| 50 | 19485770 | 62    | 20352563 | 68    | 21283213 | 95    | 10 |  |
| 51 | 19499732 | 78    | 20367531 | 85    | 21299308 | 16115 | 9  |  |
| 52 | 19513710 | 94    | 20382516 | 15003 | 21315423 | 35    | 8  |  |
| 53 | 19527704 | 14010 | 20397519 | 20    | 21331558 | 55    | 7  |  |
| 54 | 19541714 | 25    | 20412539 | 38    | 21347713 | 75    | 6  |  |
| 55 | 19555739 | 41    | 20427577 | 56    | 21363888 | 95    | 5  |  |
| 56 | 19569780 | 57    | 20442633 | 73    | 21380083 | 16215 | 4  |  |
| 57 | 19583837 | 73    | 20457706 | 91    | 21396298 | 36    | 3  |  |
| 58 | 19597910 | 89    | 20472797 | 15109 | 21412534 | 56    | 2  |  |
| 59 | 19611999 | 14105 | 20487906 | 28    | 21428790 | 77    | 1  |  |
| 60 | 19626104 |       | 20503034 |       | 21445067 |       | 0  |  |
| 27 |          |       | 26       |       |          | 25    |    |  |



| 65 |          |       | 66       |       |          | 67    |    |  |
|----|----------|-------|----------|-------|----------|-------|----|--|
| 0  | 21445067 | 16297 | 22460371 | 17594 | 23558529 | 19066 | 60 |  |
| 1  | 21461364 | 16317 | 22477965 | 17617 | 23577595 | 92    | 59 |  |
| 2  | 21477681 | 38    | 22495582 | 40    | 23596687 | 19118 | 58 |  |
| 3  | 21494019 | 58    | 22513222 | 63    | 23615805 | 45    | 57 |  |
| 4  | 21510377 | 79    | 22530885 | 86    | 23634950 | 71    | 56 |  |
| 5  | 21526756 | 99    | 22548571 | 17710 | 23654121 | 97    | 55 |  |
| 6  | 21543155 | 16420 | 22566281 | 33    | 23673318 | 19224 | 54 |  |
| 7  | 21559575 | 40    | 22584014 | 57    | 23692542 | 51    | 53 |  |
| 8  | 21576015 | 60    | 22601771 | 80    | 23711793 | 78    | 52 |  |
| 9  | 21592475 | 81    | 22619551 | 17804 | 23731071 | 19304 | 51 |  |
| 10 | 21608956 | 16502 | 22637355 | 28    | 23750375 | 31    | 50 |  |
| 11 | 21625458 | 23    | 22655183 | 51    | 23769706 | 58    | 49 |  |
| 12 | 21641981 | 44    | 22673034 | 75    | 23789064 | 84    | 48 |  |
| 13 | 21658525 | 65    | 22690909 | 99    | 23808448 | 19411 | 47 |  |
| 14 | 21675090 | 86    | 22708808 | 17922 | 23827859 | 38    | 46 |  |
| 15 | 21691676 | 16607 | 22726730 | 46    | 23847297 | 65    | 45 |  |
| 16 | 21708283 | 28    | 22744676 | 70    | 23866762 | 92    | 44 |  |
| 17 | 21724911 | 48    | 22762646 | 93    | 23886254 | 19519 | 43 |  |
| 18 | 21741559 | 69    | 22780639 | 18017 | 23905773 | 47    | 42 |  |
| 19 | 21758228 | 90    | 22798656 | 40    | 23925320 | 75    | 41 |  |
| 20 | 21774918 | 16711 | 22816696 | 64    | 23944895 | 19601 | 40 |  |
| 21 | 21791629 | 33    | 22834760 | 88    | 23964496 | 28    | 39 |  |
| 22 | 21808362 | 54    | 22852848 | 18112 | 23984124 | 55    | 38 |  |
| 23 | 21825116 | 76    | 22870960 | 36    | 24003779 | 83    | 37 |  |
| 24 | 21841892 | 97    | 22889096 | 60    | 24023462 | 19710 | 36 |  |
| 25 | 21858689 | 16819 | 22907256 | 85    | 24043172 | 38    | 35 |  |
| 26 | 21875508 | 40    | 22925441 | 18209 | 24062910 | 65    | 34 |  |
| 27 | 21892348 | 62    | 22943650 | 33    | 24082675 | 93    | 33 |  |
| 28 | 21909210 | 84    | 22961883 | 58    | 24102468 | 19821 | 32 |  |
| 29 | 21926094 | 16906 | 22980141 | 83    | 24122289 | 48    | 31 |  |
| 30 | 21943000 |       | 22998424 |       | 24142137 |       | 30 |  |
| 24 |          |       | 23       |       |          | 22    |    |  |



| 65 |          |       | 66       |       |          | 67    |    |  |
|----|----------|-------|----------|-------|----------|-------|----|--|
| 30 | 21943000 | 16926 | 22998424 | 18307 | 24142137 | 19876 | 30 |  |
| 31 | 21959926 | 48    | 23016731 | 31    | 24162013 | 19904 | 29 |  |
| 32 | 21976874 | 69    | 23035062 | 56    | 24181917 | 32    | 28 |  |
| 33 | 21993843 | 91    | 23053418 | 80    | 24201849 | 60    | 27 |  |
| 34 | 22010834 | 17012 | 23071798 | 18405 | 24221809 | 89    | 26 |  |
| 35 | 22027846 | 33    | 23090203 | 29    | 24241798 | 20017 | 25 |  |
| 36 | 22044879 | 55    | 23108632 | 54    | 24261815 | 45    | 24 |  |
| 37 | 22061934 | 77    | 23127086 | 79    | 24281860 | 74    | 23 |  |
| 38 | 22079011 | 98    | 23145565 | 18503 | 24301934 | 20103 | 22 |  |
| 39 | 22096109 | 17120 | 23164068 | 29    | 24322037 | 32    | 21 |  |
| 40 | 22113229 | 43    | 23182597 | 54    | 24342169 | 60    | 20 |  |
| 41 | 22130372 | 65    | 23201151 | 79    | 24362329 | 89    | 19 |  |
| 42 | 22147537 | 88    | 23219730 | 18605 | 24382518 | 20217 | 18 |  |
| 43 | 22164725 | 17210 | 23238335 | 30    | 24402735 | 46    | 17 |  |
| 44 | 22181935 | 233   | 23256965 | 56    | 24422981 | 75    | 16 |  |
| 45 | 22199168 | 56    | 23275621 | 81    | 24443256 | 20303 | 15 |  |
| 46 | 22216424 | 79    | 23294302 | 18706 | 24463559 | 32    | 14 |  |
| 47 | 22233703 | 17301 | 23313008 | 32    | 24483891 | 61    | 13 |  |
| 48 | 22251004 | 24    | 23331740 | 58    | 24504252 | 91    | 12 |  |
| 49 | 22268328 | 47    | 23350498 | 84    | 24524642 | 20419 | 11 |  |
| 50 | 22285675 | 69    | 23369282 | 18810 | 24545061 | 48    | 10 |  |
| 51 | 22303044 | 91    | 23388092 | 35    | 24565509 | 77    | 9  |  |
| 52 | 22320435 | 17413 | 23406927 | 61    | 24585986 | 20506 | 8  |  |
| 53 | 22337848 | 36    | 23425788 | 86    | 24606492 | 36    | 7  |  |
| 54 | 22355284 | 58    | 23444674 | 18912 | 24627028 | 66    | 6  |  |
| 55 | 22372742 | 81    | 23463586 | 37    | 24647594 | 99    | 5  |  |
| 56 | 22390223 | 17503 | 23482523 | 63    | 24668189 | 20625 | 4  |  |
| 57 | 22407726 | 26    | 23501486 | 89    | 24688814 | 55    | 3  |  |
| 58 | 22425252 | 48    | 23520475 | 19014 | 24709469 | 85    | 2  |  |
| 59 | 22442800 | 71    | 23539489 | 40    | 24730154 | 20715 | 1  |  |
| 60 | 22460371 |       | 23558529 |       | 24750869 |       | 0  |  |
| 24 |          |       | 23       |       |          | 22    |    |  |



# C A N O N

| 68 |          |       | 69       |       |          | 70    |    |  |
|----|----------|-------|----------|-------|----------|-------|----|--|
| 0  | 24750869 | 20744 | 26050893 | 22666 | 27474777 | 24888 | 60 |  |
| 1  | 24771613 | 74    | 26073559 | 22701 | 27499665 | 24927 | 59 |  |
| 2  | 24792387 |       | 26096260 | 36    | 27524592 | 67    | 58 |  |
| 3  | 24813191 | 20804 | 26118996 | 70    | 27549559 | 25006 | 57 |  |
| 4  | 24834024 | 33    | 26141766 | 22805 | 27574565 | 47    | 56 |  |
| 5  | 24854887 | 63    | 26164571 | 40    | 27599612 | 87    | 55 |  |
| 6  | 24875780 | 93    | 26187411 | 75    | 27624699 | 25128 | 54 |  |
| 7  | 24896704 | 20924 | 26210286 | 22910 | 27649827 | 68    | 53 |  |
| 8  | 24917659 | 55    | 26233196 | 45    | 27674995 | 25209 | 52 |  |
| 9  | 24938644 | 85    | 26256141 | 79    | 27700204 | 49    | 51 |  |
| 10 | 24959659 | 21015 | 26279120 | 23015 | 27725453 | 89    | 50 |  |
| 11 | 24980705 | 46    | 26302135 | 50    | 27750742 | 25330 | 49 |  |
| 12 | 25001782 | 77    | 26325185 | 85    | 27776072 | 71    | 48 |  |
| 13 | 25022890 | 21108 | 26348270 | 23120 | 27801443 | 25412 | 47 |  |
| 14 | 25044029 | 39    | 26371390 | 56    | 27826855 | 53    | 46 |  |
| 15 | 25065198 | 69    | 26394546 | 92    | 27852308 | 95    | 45 |  |
| 16 | 25086398 | 21200 | 26417738 | 23228 | 27877803 | 25532 | 44 |  |
| 17 | 25107629 | 31    | 26440966 | 63    | 27903339 | 78    | 43 |  |
| 18 | 25128891 | 62    | 26464229 | 99    | 27928917 | 25619 | 42 |  |
| 19 | 25150183 | 92    | 26487528 | 23335 | 27954536 | 60    | 41 |  |
| 20 | 25171506 | 21323 | 26510863 | 71    | 27980196 | 25702 | 40 |  |
| 21 | 25192861 | 55    | 26534234 | 23407 | 28005898 | 44    | 39 |  |
| 22 | 25214248 | 87    | 26557641 | 43    | 28031642 | 87    | 38 |  |
| 23 | 25235666 | 21418 | 26581084 | 79    | 28057429 | 25829 | 37 |  |
| 24 | 25257116 | 50    | 26604563 | 23516 | 28083258 | 71    | 36 |  |
| 25 | 25278597 | 81    | 26628079 | 52    | 28109129 | 25914 | 35 |  |
| 26 | 25300110 | 21513 | 26651631 | 89    | 28135043 | 56    | 34 |  |
| 27 | 25321655 | 545   | 26675220 | 23625 | 28160999 | 99    | 33 |  |
| 28 | 25343232 | 77    | 26698845 | 61    | 28186998 | 26042 | 32 |  |
| 29 | 25364841 | 21609 | 26722507 | 99    | 28213040 | 85    | 31 |  |
| 30 | 25386482 | 41    | 26746206 |       | 28239125 |       | 30 |  |
| 21 |          |       | 20       |       |          | 19    |    |  |



| 68 |          |       | 69       |       |          | 70    |    |  |
|----|----------|-------|----------|-------|----------|-------|----|--|
| 30 | 25386482 | 21672 | 26746006 | 23736 | 28239125 | 26128 | 30 |  |
| 31 | 25408154 | 21702 | 26769942 | 74    | 28265253 | 71    | 29 |  |
| 32 | 25429858 | 36    | 26793716 | 23811 | 28291424 | 26214 | 28 |  |
| 33 | 25451594 | 68    | 26816527 | 48    | 28317638 | 57    | 27 |  |
| 34 | 25473362 | 21800 | 26841375 | 85    | 28343895 | 26300 | 26 |  |
| 35 | 25495162 | 33    | 26865260 | 23923 | 28379195 | 44    | 25 |  |
| 36 | 25516995 | 65    | 26889183 | 60    | 28396529 | 87    | 24 |  |
| 37 | 25538860 | 98    | 26913143 | 98    | 28422926 | 26431 | 23 |  |
| 38 | 25560758 | 21930 | 26937141 | 24036 | 28449357 | 75    | 22 |  |
| 39 | 25582688 | 63    | 26961177 | 74    | 28475832 | 26518 | 21 |  |
| 40 | 25604651 | 96    | 26985251 | 24111 | 28502350 | 63    | 20 |  |
| 41 | 25626647 | 22028 | 27009362 | 49    | 28528913 | 26607 | 19 |  |
| 42 | 25628675 | 61    | 27033511 | 87    | 28555520 | 52    | 18 |  |
| 43 | 25670736 | 94    | 27057698 | 24224 | 28582172 | 96    | 17 |  |
| 44 | 25692830 | 22127 | 27081922 | 62    | 28608868 | 26740 | 16 |  |
| 45 | 25714957 | 61    | 27106184 | 24300 | 28635608 | 85    | 15 |  |
| 46 | 25737118 | 94    | 27130484 | 39    | 28662393 | 26829 | 14 |  |
| 47 | 25759312 | 22228 | 27154823 | 77    | 28689222 | 74    | 13 |  |
| 48 | 25781540 | 61    | 27179200 | 24416 | 28716096 | 26919 | 12 |  |
| 49 | 25803801 | 95    | 27203616 | 54    | 28743015 | 64    | 11 |  |
| 50 | 25826096 | 22328 | 27228070 | 93    | 28769979 | 27008 | 10 |  |
| 51 | 25848424 | 62    | 27252563 | 24532 | 28796987 | 53    | 9  |  |
| 52 | 25870786 | 95    | 27277095 | 72    | 28824040 | 99    | 8  |  |
| 53 | 25893181 | 22429 | 27301667 | 24611 | 28851139 | 27144 | 7  |  |
| 54 | 25915610 | 63    | 27326278 | 51    | 28878283 | 89    | 6  |  |
| 55 | 25938073 | 96    | 27350929 | 91    | 28905472 | 27235 | 5  |  |
| 56 | 25960569 | 22530 | 27375620 | 24730 | 28932707 | 81    | 4  |  |
| 57 | 25983099 | 64    | 27400350 | 70    | 28959988 | 27327 | 3  |  |
| 58 | 26005663 | 98    | 27425120 | 24809 | 28987315 | 72    | 2  |  |
| 59 | 26028261 | 22632 | 27449929 | 48    | 29014687 | 27418 | 1  |  |
| 60 | 26050893 |       | 27474777 |       | 29042105 |       | 0  |  |
| 21 |          |       | 20       |       |          | 19    |    |  |



# C A N O N

| 71 |          |       | 72       |       |          | 73    |    |  |  |
|----|----------|-------|----------|-------|----------|-------|----|--|--|
| 0  | 29042105 | 27464 | 30776834 | 30489 | 32708528 | 34058 | 60 |  |  |
| 1  | 29069569 | 81    | 30807323 | 30543 | 32745286 | 123   | 59 |  |  |
| 2  | 29097080 | 58    | 30837866 | 599   | 32776709 | 189   | 58 |  |  |
| 3  | 29124638 | 27505 | 30868465 | 30654 | 32810898 | 255   | 57 |  |  |
| 4  | 29152243 | 52    | 30899119 | 30709 | 32845153 | 321   | 56 |  |  |
| 5  | 29179895 | 27700 | 30929828 | 65    | 32879747 | 388   | 55 |  |  |
| 6  | 29107595 | 27748 | 30960593 | 30820 | 32913862 | 455   | 54 |  |  |
| 7  | 29235343 | 96    | 30991413 | 76    | 32948317 | 522   | 53 |  |  |
| 8  | 29263139 | 27843 | 31022289 | 30932 | 32982839 | 588   | 52 |  |  |
| 9  | 29290982 | 91    | 31053221 | 87    | 33017427 | 655   | 51 |  |  |
| 10 | 29318873 | 28034 | 31084208 | 31044 | 33052082 | 720   | 50 |  |  |
| 11 | 29346811 | 82    | 31115252 | 31100 | 33086802 | 786   | 49 |  |  |
| 12 | 29374797 | 28034 | 31146352 | 56    | 33121588 | 853   | 48 |  |  |
| 13 | 29402831 | 82    | 31177508 | 31212 | 33156441 | 921   | 47 |  |  |
| 14 | 29430913 | 28130 | 31208720 | 69    | 33191362 | 989   | 46 |  |  |
| 15 | 29459043 | 78    | 31239989 | 31326 | 33226351 | 35057 | 45 |  |  |
| 16 | 29487221 | 28225 | 31271315 | 83    | 33261408 | 126   | 44 |  |  |
| 17 | 29515446 | 73    | 31302698 | 31440 | 33296534 | 194   | 43 |  |  |
| 18 | 29543719 | 28322 | 31334138 | 98    | 33331728 | 262   | 42 |  |  |
| 19 | 29572041 | 70    | 31365636 | 31555 | 33366990 | 331   | 41 |  |  |
| 20 | 29600411 | 28420 | 31397191 | 31614 | 33402321 | 399   | 40 |  |  |
| 21 | 29628831 | 70    | 31428805 | 71    | 33437720 | 468   | 39 |  |  |
| 22 | 29657301 | 28519 | 31460476 | 31731 | 33473188 | 537   | 38 |  |  |
| 23 | 29685820 | 68    | 31492205 | 87    | 33508725 | 605   | 37 |  |  |
| 24 | 29714388 | 28618 | 31523992 | 31846 | 33544330 | 675   | 36 |  |  |
| 25 | 29743006 | 68    | 31555838 | 31904 | 33580005 | 745   | 35 |  |  |
| 26 | 29771674 | 28718 | 31587742 | 63    | 33615750 | 816   | 34 |  |  |
| 27 | 29800392 | 67    | 31619705 | 32022 | 33651566 | 887   | 33 |  |  |
| 28 | 29829160 | 28818 | 31651727 | 80    | 33687453 | 957   | 32 |  |  |
| 29 | 29857978 | 69    | 31683807 | 32139 | 33723410 | 26028 | 31 |  |  |
| 30 | 29886847 |       | 31715946 |       | 33759438 |       | 30 |  |  |
| 18 |          |       | 17       |       |          | 16    |    |  |  |



| 71 |          |       | 72       |       |          | 73    |    |  |
|----|----------|-------|----------|-------|----------|-------|----|--|
| 30 | 29886847 | 28918 | 31715946 | 32198 | 33759438 | 36095 | 30 |  |
| 31 | 29915765 | 69    | 31748144 | 32257 | 33795535 | 168   | 29 |  |
| 32 | 29944734 | 29019 | 31780401 | 32316 | 33831703 | 239   | 28 |  |
| 33 | 29973753 | 70    | 31812717 | 76    | 33867942 | 310   | 27 |  |
| 34 | 30002821 | 29120 | 31845093 | 32435 | 33904252 | 382   | 26 |  |
| 35 | 30031943 | 70    | 31877528 | 96    | 33940634 | 454   | 25 |  |
| 36 | 30061113 | 29221 | 31910024 | 32556 | 33977088 | 527   | 24 |  |
| 37 | 30090334 | 71    | 31942580 | 32617 | 34013615 | 600   | 23 |  |
| 38 | 30119605 | 29322 | 31975197 | 78    | 34050215 | 673   | 22 |  |
| 39 | 30148927 | 72    | 32007875 | 32738 | 34086888 | 746   | 21 |  |
| 40 | 30178299 | 29424 | 32040613 | 32800 | 34123634 | 819   | 20 |  |
| 41 | 30207723 | 77    | 32073413 | 62    | 34160453 | 892   | 19 |  |
| 42 | 30237200 | 29530 | 32106275 | 32925 | 34197345 | 965   | 18 |  |
| 43 | 30266730 | 82    | 32139200 | 87    | 34234310 | 37038 | 17 |  |
| 44 | 30296312 | 29635 | 32172187 | 33050 | 34271348 | 111   | 16 |  |
| 45 | 30325947 | 88    | 32205237 | 33112 | 34308459 | 185   | 15 |  |
| 46 | 30355635 | 29741 | 32238349 | 75    | 34345644 | 259   | 14 |  |
| 47 | 30385375 | 94    | 32271524 | 33238 | 34382903 | 334   | 13 |  |
| 48 | 30415169 | 29846 | 32304762 | 33302 | 34420237 | 410   | 12 |  |
| 49 | 30445015 | 29900 | 32338064 | 66    | 34457647 | 485   | 11 |  |
| 50 | 30474915 | 52    | 32371430 | 33428 | 34495132 | 560   | 10 |  |
| 51 | 30504867 | 30005 | 32404858 | 90    | 34532692 | 635   | 9  |  |
| 52 | 30534872 | 58    | 32438348 | 33553 | 34570327 | 711   | 8  |  |
| 53 | 30564930 | 30111 | 32471901 | 33616 | 34608038 | 786   | 7  |  |
| 54 | 30595041 | 64    | 32505517 | 79    | 34645824 | 862   | 6  |  |
| 55 | 30625205 | 30218 | 32539196 | 33741 | 34683686 | 939   | 5  |  |
| 56 | 30655423 | 72    | 32572937 | 33804 | 34721625 | 38015 | 4  |  |
| 57 | 30685695 | 30335 | 32606741 | 66    | 34759640 | 093   | 3  |  |
| 58 | 30716020 | 80    | 32640607 | 33929 | 34797733 | 170   | 2  |  |
| 59 | 30746400 | 30434 | 32674536 | 92    | 34835903 | 248   | 1  |  |
| 60 | 30776834 |       | 32708528 |       | 34874151 |       | 0  |  |
| 18 |          |       | 17       |       |          | 16    |    |  |



# CANON

| 74 |          |       | 75       |       |          | 76    |    |  |
|----|----------|-------|----------|-------|----------|-------|----|--|
| 0  | 34874151 | 38326 | 37320517 | 43470 | 40107808 | 49761 | 60 |  |
| 1  | 34912477 | 404   | 37363987 | 564   | 40157569 | 877   | 59 |  |
| 2  | 34950881 | 483   | 37407551 | 659   | 40207446 | 994   | 58 |  |
| 3  | 34989364 | 561   | 37451210 | 754   | 40257440 | 50112 | 57 |  |
| 4  | 35027925 | 640   | 37494964 | 850   | 40307552 | 229   | 56 |  |
| 5  | 35066565 | 718   | 37538814 | 946   | 40357781 | 348   | 55 |  |
| 6  | 35105283 | 797   | 37582760 | 44043 | 40408129 | 467   | 54 |  |
| 7  | 35144080 | 876   | 37626803 | 140   | 40458596 | 587   | 53 |  |
| 8  | 35182956 | 955   | 37670943 | 237   | 40509183 | 707   | 52 |  |
| 9  | 35221911 | 39034 | 37715180 | 335   | 40559890 | 828   | 51 |  |
| 10 | 35260945 | 114   | 37759515 | 433   | 40610718 | 947   | 50 |  |
| 11 | 35300059 | 194   | 37803948 | 531   | 40661665 | 51066 | 49 |  |
| 12 | 35330252 | 275   | 37848479 | 630   | 40712731 | 186   | 48 |  |
| 13 | 35378528 | 355   | 37893109 | 729   | 40763917 | 307   | 47 |  |
| 14 | 35417883 | 437   | 37937838 | 828   | 40815224 | 428   | 46 |  |
| 15 | 35457320 | 518   | 37982666 | 926   | 40866652 | 549   | 45 |  |
| 16 | 35496838 | 600   | 38027592 | 45024 | 40918201 | 670   | 44 |  |
| 17 | 35536438 | 683   | 38072616 | 124   | 40969871 | 792   | 43 |  |
| 18 | 35576121 | 767   | 38117740 | 223   | 41021663 | 914   | 42 |  |
| 19 | 35615888 | 851   | 38162963 | 322   | 41073577 | 52037 | 41 |  |
| 20 | 35655739 | 933   | 38208285 | 423   | 41125614 | 161   | 40 |  |
| 21 | 35695672 | 40017 | 38253708 | 524   | 41177775 | 287   | 39 |  |
| 22 | 35735689 | 100   | 38299232 | 625   | 41230062 | 413   | 38 |  |
| 23 | 35775789 | 184   | 38344857 | 727   | 41282475 | 540   | 37 |  |
| 24 | 35815973 | 268   | 38390584 | 830   | 41335015 | 668   | 36 |  |
| 25 | 35856241 | 352   | 38436414 | 933   | 41387683 | 787   | 35 |  |
| 26 | 35896593 | 436   | 38482347 | 46037 | 41440480 | 927   | 34 |  |
| 27 | 35937029 | 521   | 38528384 | 141   | 41493407 | 53057 | 33 |  |
| 28 | 35977550 | 606   | 38574525 | 247   | 41546464 | 189   | 32 |  |
| 29 | 36018156 | 692   | 38620772 | 353   | 41599653 | 321   | 31 |  |
| 30 | 36058848 |       | 38667125 |       | 41652974 |       | 30 |  |
| 15 |          |       | 14       |       |          | 13    |    |  |



| 74 |          |       | 75       |       |          | 76    |    |  |
|----|----------|-------|----------|-------|----------|-------|----|--|
| 30 | 36058848 | 40775 | 38667125 | 46455 | 41652974 | 53450 | 30 |  |
| 31 | 36099623 | 860   | 38713580 | 559   | 41706424 | 579   | 29 |  |
| 32 | 36140483 | 944   | 38760139 | 662   | 41760003 | 709   | 28 |  |
| 33 | 36181427 | 41029 | 38806801 | 766   | 41813712 | 838   | 27 |  |
| 34 | 36222456 | 114   | 38853567 | 871   | 41867550 | 968   | 26 |  |
| 35 | 36263570 | 201   | 38900438 | 978   | 41921518 | 54099 | 25 |  |
| 36 | 36304771 | 289   | 38947416 | 47085 | 41975617 | 231   | 24 |  |
| 37 | 36346060 | 377   | 38994501 | 194   | 42029848 | 363   | 23 |  |
| 38 | 36387437 | 466   | 39041695 | 303   | 42084211 | 495   | 22 |  |
| 39 | 36428903 | 556   | 39088998 | 411   | 42138706 | 628   | 21 |  |
| 40 | 36470459 | 644   | 39136409 | 520   | 42193334 | 726   | 20 |  |
| 41 | 36512103 | 733   | 39183929 | 628   | 42248096 | 897   | 19 |  |
| 42 | 36553836 | 823   | 39231557 | 737   | 42302993 | 55032 | 18 |  |
| 43 | 36595659 | 913   | 39279294 | 845   | 42358025 | 168   | 17 |  |
| 44 | 36637572 | 42002 | 39327139 | 955   | 42413193 | 304   | 16 |  |
| 45 | 36679574 | 092   | 39375094 | 48064 | 42468497 | 440   | 15 |  |
| 46 | 36721666 | 183   | 39423158 | 173   | 42523937 | 577   | 14 |  |
| 47 | 36763849 | 272   | 39471331 | 283   | 42579514 | 714   | 13 |  |
| 48 | 36806121 | 362   | 39519614 | 392   | 42635228 | 852   | 12 |  |
| 49 | 36848483 | 453   | 39568006 | 503   | 42691080 | 990   | 11 |  |
| 50 | 36890936 | 543   | 39616509 | 615   | 42747070 | 56129 | 10 |  |
| 51 | 36933479 | 635   | 39665124 | 728   | 42803199 | 269   | 9  |  |
| 52 | 36976114 | 726   | 39713852 | 843   | 42859468 | 410   | 8  |  |
| 53 | 37018840 | 819   | 39762695 | 959   | 42915878 | 551   | 7  |  |
| 54 | 37061659 | 911   | 39811654 | 49075 | 42972429 | 693   | 6  |  |
| 55 | 37104570 | 43004 | 39860729 | 188   | 43029122 | 836   | 5  |  |
| 56 | 37147574 | 096   | 39909917 | 301   | 43085958 | 979   | 4  |  |
| 57 | 37190670 | 189   | 39959218 | 415   | 43142937 | 57123 | 3  |  |
| 58 | 37233859 | 282   | 40008633 | 530   | 43200060 | 268   | 2  |  |
| 59 | 37277141 | 376   | 40058103 | 645   | 43257328 | 414   | 1  |  |
| 60 | 37320517 |       | 40107808 |       | 43314742 |       | 0  |  |
| 15 |          |       | 14       |       |          | 13    |    |  |



# CANON

| 77 |          |       | 78       |       |          | 79    |    |  |  |
|----|----------|-------|----------|-------|----------|-------|----|--|--|
| 0  | 43314742 | 57559 | 47046295 | 67385 | 51445543 | 80018 | 60 |  |  |
| 1  | 43372301 | 705   | 47113680 | 569   | 51525561 | 259   | 59 |  |  |
| 2  | 43430006 | 851   | 47181249 | 754   | 51605820 | 501   | 58 |  |  |
| 3  | 43487857 | 998   | 47249003 | 939   | 51686321 | 744   | 57 |  |  |
| 4  | 43545855 | 58145 | 47316942 | 68125 | 51767065 | 988   | 56 |  |  |
| 5  | 43604000 | 293   | 47385067 | 313   | 51848053 | 81232 | 55 |  |  |
| 6  | 43662293 | 440   | 47453380 | 502   | 51929285 | 477   | 54 |  |  |
| 7  | 43720733 | 588   | 47521882 | 693   | 52010762 | 723   | 53 |  |  |
| 8  | 43779321 | 736   | 47590575 | 885   | 52092485 | 970   | 52 |  |  |
| 9  | 43838057 | 885   | 47659460 | 69078 | 52174455 | 82218 | 51 |  |  |
| 10 | 43896942 | 59035 | 47728538 | 271   | 52256673 | 467   | 50 |  |  |
| 11 | 43955977 | 186   | 47797809 | 465   | 52339140 | 717   | 49 |  |  |
| 12 | 44015163 | 338   | 47867274 | 660   | 52411857 | 969   | 48 |  |  |
| 13 | 44074501 | 491   | 47936934 | 856   | 52504826 | 83222 | 47 |  |  |
| 14 | 44133992 | 645   | 48006790 | 70051 | 52588048 | 477   | 46 |  |  |
| 15 | 44193637 | 798   | 48076841 | 247   | 52671525 | 734   | 45 |  |  |
| 16 | 44253435 | 952   | 48147088 | 443   | 52755259 | 992   | 44 |  |  |
| 17 | 44313387 | 60107 | 48217531 | 640   | 52839251 | 84252 | 43 |  |  |
| 18 | 44373494 | 262   | 48288171 | 837   | 52923503 | 513   | 42 |  |  |
| 19 | 44433756 | 418   | 48359008 | 71035 | 53008016 | 776   | 41 |  |  |
| 20 | 44494174 | 575   | 48430043 | 235   | 53092792 | 85039 | 40 |  |  |
| 21 | 44554749 | 732   | 48501278 | 436   | 53177831 | 303   | 39 |  |  |
| 22 | 44615481 | 890   | 48572714 | 638   | 53263134 | 568   | 38 |  |  |
| 23 | 44676371 | 61048 | 48644352 | 841   | 53348702 | 834   | 37 |  |  |
| 24 | 44737419 | 207   | 48716193 | 72045 | 53434536 | 86101 | 36 |  |  |
| 25 | 44798626 | 367   | 48788238 | 250   | 53520637 | 369   | 35 |  |  |
| 26 | 44859993 | 528   | 48860488 | 457   | 53607006 | 638   | 34 |  |  |
| 27 | 44921521 | 690   | 48932945 | 665   | 53693644 | 908   | 33 |  |  |
| 28 | 44983211 | 854   | 49005610 | 873   | 53780552 | 87179 | 32 |  |  |
| 29 | 45045065 | 62018 | 49078483 | 73082 | 53867731 | 597   | 31 |  |  |
| 30 | 45107083 |       | 49151565 |       | 53955183 |       | 30 |  |  |
| I2 |          |       | II       |       |          | IO    |    |  |  |



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78

79

|    |          |       |          |       |          |       |    |
|----|----------|-------|----------|-------|----------|-------|----|
| 30 | 45107083 | 62180 | 49151565 | 73291 | 53955183 | 87826 | 30 |
| 31 | 45169263 | 344   | 4922486  | 501   | 54042909 | 88002 | 29 |
| 32 | 45231607 | 507   | 49298357 | 712   | 54130911 | 279   | 28 |
| 33 | 45294114 | 671   | 49372069 | 924   | 54219190 | 558   | 27 |
| 34 | 45356785 | 836   | 49445993 | 74146 | 54307748 | 838   | 26 |
| 35 | 45419621 | 63002 | 49520130 | 351   | 54396586 | 89119 | 25 |
| 36 | 45482623 | 167   | 49594481 | 566   | 54485705 | 402   | 24 |
| 37 | 45545790 | 333   | 49669047 | 782   | 54575107 | 686   | 23 |
| 38 | 45609123 | 500   | 49743829 | 998   | 54664793 | 921   | 22 |
| 39 | 45672623 | 668   | 49818827 | 75215 | 54754764 | 90258 | 21 |
| 40 | 45736291 | 837   | 49894042 | 433   | 54845022 | 547   | 20 |
| 41 | 45800128 | 64007 | 49969475 | 625   | 54935569 | 837   | 19 |
| 42 | 45864135 | 179   | 50045127 | 872   | 55029406 | 91129 | 18 |
| 43 | 45928314 | 352   | 50120999 | 76093 | 55117535 | 423   | 17 |
| 44 | 45992666 | 526   | 50197092 | 315   | 55208958 | 718   | 16 |
| 45 | 46057192 | 700   | 50273407 | 538   | 55300676 | 92016 | 15 |
| 46 | 46121892 | 875   | 50349945 | 762   | 55392692 | 315   | 14 |
| 47 | 46186767 | 65050 | 50246707 | 988   | 55485007 | 615   | 13 |
| 48 | 46251817 | 226   | 50503695 | 77215 | 55577622 | 917   | 12 |
| 49 | 46317043 | 402   | 50580910 | 443   | 55670539 | 93220 | 11 |
| 50 | 46382445 | 578   | 50658353 | 672   | 55763759 | 524   | 10 |
| 51 | 46448023 | 755   | 50736025 | 902   | 55857283 | 829   | 9  |
| 52 | 46513778 | 933   | 50812927 | 78133 | 55951112 | 94135 | 8  |
| 53 | 46579711 | 66112 | 50892060 | 365   | 56045247 | 442   | 7  |
| 54 | 46645823 | 292   | 50970425 | 598   | 56139689 | 750   | 6  |
| 55 | 46712115 | 472   | 51049023 | 832   | 56234439 | 95059 | 5  |
| 56 | 46778587 | 653   | 51127855 | 79067 | 56329498 | 370   | 4  |
| 57 | 46845240 | 835   | 51206922 | 303   | 56424868 | 682   | 3  |
| 58 | 46912075 | 67018 | 51286225 | 540   | 56520550 | 995   | 2  |
| 59 | 46979093 | 202   | 51365765 | 778   | 56616545 | 96309 | 1  |
| 60 | 47046295 |       | 51445543 |       | 56712854 |       | 0  |

I2

II

IO



| 80 |          |        | 81       |        |    |
|----|----------|--------|----------|--------|----|
| 0  | 56712854 | 96626  | 63137478 | 119086 | 60 |
| 1  | 56809480 | 945    | 63256564 | 9525   | 59 |
| 2  | 56906425 | 97265  | 63376089 | 9967   | 58 |
| 3  | 57003690 | 587    | 63496056 | 120412 | 57 |
| 4  | 57101277 | 911    | 63616468 | 0859   | 56 |
| 5  | 57199188 | 98237  | 63737327 | 1308   | 55 |
| 6  | 57297425 | 565    | 63858635 | 1759   | 54 |
| 7  | 57395990 | 895    | 63980394 | 2213   | 53 |
| 8  | 57494885 | 99226  | 64102607 | 2669   | 52 |
| 9  | 57594111 | 569    | 64225276 | 3128   | 51 |
| 10 | 57693670 | 894    | 64348404 | 3590   | 50 |
| 11 | 57793564 | 100231 | 64471994 | 4055   | 49 |
| 12 | 57893795 | 571    | 64596049 | 4522   | 48 |
| 13 | 57994366 | 913    | 64720571 | 4992   | 47 |
| 14 | 58095279 | 101257 | 64845563 | 5465   | 46 |
| 15 | 58196536 | 602    | 64971028 | 5941   | 45 |
| 16 | 58298138 | 949    | 65096969 | 6419   | 44 |
| 17 | 58400087 | 102298 | 65223388 | 6899   | 43 |
| 18 | 58502385 | 649    | 65350287 | 7382   | 42 |
| 19 | 58605034 | 103001 | 65477669 | 7868   | 41 |
| 20 | 58708035 | 353    | 65605537 | 8357   | 40 |
| 21 | 58811388 | 707    | 65733894 | 8849   | 39 |
| 22 | 58915095 | 104062 | 65862743 | 9344   | 38 |
| 23 | 59019157 | 419    | 65992087 | 9841   | 37 |
| 24 | 59123576 | 777    | 66121928 | 130340 | 36 |
| 25 | 59228353 | 105137 | 66252268 | 0842   | 35 |
| 26 | 59333490 | 499    | 66383110 | 1347   | 34 |
| 27 | 59438989 | 863    | 66514457 | 1856   | 33 |
| 28 | 59544852 | 106229 | 66646313 | 2968   | 32 |
| 29 | 59651081 | 597    | 66778681 | 132883 | 31 |
| 30 | 59757678 |        | 66911564 |        | 30 |
| 9  |          |        | 8        |        |    |



| 80 |          |        | 81       |        |    |
|----|----------|--------|----------|--------|----|
| 30 | 59757678 | 106968 | 66911564 | 133401 | 30 |
| 31 | 59864646 | 107341 | 67044965 | 3922   | 29 |
| 32 | 59971987 | 716    | 67178887 | 4447   | 28 |
| 33 | 60079703 | 108093 | 67313334 | 4975   | 27 |
| 34 | 60187796 | 472    | 67448309 | 5506   | 26 |
| 35 | 60296268 | 835    | 67583815 | 6040   | 25 |
| 36 | 60405121 | 109237 | 67719855 | 6577   | 24 |
| 37 | 60514358 | 623    | 67856423 | 7117   | 23 |
| 38 | 60623981 | 110011 | 67993549 | 7660   | 22 |
| 39 | 60733992 | 400    | 68131209 | 8207   | 21 |
| 40 | 60844392 | 792    | 68269416 | 8757   | 20 |
| 41 | 60955184 | 111186 | 68408173 | 9310   | 19 |
| 42 | 61066370 | 582    | 68547438 | 9867   | 18 |
| 43 | 61177952 | 978    | 68687350 | 140427 | 17 |
| 44 | 61289930 | 112377 | 68827777 | 0991   | 16 |
| 45 | 61402307 | 778    | 68968768 | 1558   | 15 |
| 46 | 61515085 | 113182 | 69110326 | 2129   | 14 |
| 47 | 61628267 | 589    | 69252455 | 2703   | 13 |
| 48 | 61741856 | 998    | 69395158 | 3281   | 12 |
| 49 | 61855854 | 114409 | 69538439 | 3863   | 11 |
| 50 | 61970263 | 822    | 69682302 | 4449   | 10 |
| 51 | 62085085 | 115238 | 69826751 | 5038   | 9  |
| 52 | 62200323 | 656    | 69971789 | 5630   | 8  |
| 53 | 62315979 | 116077 | 70117419 | 6226   | 7  |
| 54 | 62432056 | 500    | 70263645 | 6825   | 6  |
| 55 | 62548556 | 925    | 70410470 | 7428   | 5  |
| 56 | 62665481 | 117352 | 70557898 | 8034   | 4  |
| 57 | 62782833 | 782    | 70705932 | 8644   | 3  |
| 58 | 62900615 | 118214 | 70854576 | 9257   | 2  |
| 59 | 63018829 | 649    | 71003833 | 149873 | 1  |
| 60 | 63137478 |        | 71153706 |        | 0  |
| 9  |          |        | 8        |        |    |



| 82 |          |        | 83       |        |    |
|----|----------|--------|----------|--------|----|
| 0  | 71153707 | 150491 | 81443502 | 196319 | 60 |
| 1  | 71304198 | 1115   | 81639821 | 7253   | 59 |
| 2  | 71455313 | 1745   | 81837074 | 8194   | 58 |
| 3  | 71607058 | 2382   | 82035268 | 9142   | 57 |
| 4  | 71759440 | 3019   | 82234410 | 200098 | 56 |
| 5  | 71912459 | 3658   | 82434508 | 1062   | 55 |
| 6  | 72066117 | 4305   | 82635570 | 2033   | 54 |
| 7  | 72220422 | 4954   | 82837603 | 3011   | 53 |
| 8  | 72375376 | 5607   | 83040614 | 3996   | 52 |
| 9  | 72530983 | 6264   | 83244610 | 4988   | 51 |
| 10 | 72687247 | 6926   | 83449598 | 5987   | 50 |
| 11 | 72844173 | 7593   | 83655585 | 6987   | 49 |
| 12 | 73001766 | 8265   | 83862572 | 7993   | 48 |
| 13 | 73160031 | 8941   | 84070565 | 9006   | 47 |
| 14 | 73318972 | 9621   | 84279571 | 210027 | 46 |
| 15 | 73478593 | 160305 | 84489598 | 1089   | 45 |
| 16 | 73638898 | 0994   | 84700687 | 2130   | 44 |
| 17 | 73799892 | 1687   | 84912817 | 3178   | 43 |
| 18 | 73961579 | 2385   | 85125995 | 4234   | 42 |
| 19 | 74123964 | 3088   | 85340229 | 5296   | 41 |
| 20 | 74287052 | 3795   | 85555525 | 6366   | 40 |
| 21 | 74450847 | 4507   | 85771891 | 7444   | 39 |
| 22 | 74615354 | 5223   | 85989335 | 8531   | 38 |
| 23 | 74780577 | 5944   | 86207866 | 9617   | 37 |
| 24 | 74946521 | 6668   | 86427493 | 220732 | 36 |
| 25 | 75113189 | 7397   | 86648225 | 1847   | 35 |
| 26 | 75280586 | 8130   | 86870072 | 2971   | 34 |
| 27 | 75448716 | 8868   | 87093043 | 4107   | 33 |
| 28 | 75617584 | 9611   | 87317150 | 5254   | 32 |
| 29 | 75787195 | 170359 | 87542404 | 226412 | 31 |
| 30 | 75957554 |        | 87768816 |        | 30 |
| 7  |          |        | 6        |        |    |



| 82 |          |        | 83       |        |    |
|----|----------|--------|----------|--------|----|
| 30 | 75957554 | 171112 | 87768816 | 227578 | 30 |
| 31 | 76128666 | 1870   | 87996394 | 8752   | 29 |
| 32 | 76300536 | 2634   | 88225146 | 9933   | 28 |
| 33 | 76473170 | 3403   | 88455079 | 231117 | 27 |
| 34 | 76646573 | 4178   | 88686196 | 2312   | 26 |
| 35 | 76820751 | 4959   | 88918508 | 3512   | 25 |
| 36 | 76995710 | 5745   | 89152021 | 4724   | 24 |
| 37 | 77171455 | 6536   | 89386745 | 5943   | 23 |
| 38 | 77347991 | 7333   | 89622688 | 7171   | 22 |
| 39 | 77525324 | 8135   | 89859858 | 8409   | 21 |
| 40 | 77703459 | 8943   | 90098268 | 9659   | 20 |
| 41 | 77882402 | 9757   | 90337927 | 240921 | 19 |
| 42 | 78062159 | 180578 | 90578848 | 2195   | 18 |
| 43 | 78242737 | 1405   | 90821043 | 3483   | 17 |
| 44 | 78424142 | 2237   | 91064526 | 4783   | 16 |
| 45 | 78606379 | 3075   | 91309309 | 6092   | 15 |
| 46 | 78789454 | 3917   | 91555401 | 7409   | 14 |
| 47 | 78973371 | 4765   | 91802810 | 8736   | 13 |
| 48 | 79158136 | 5618   | 92051546 | 250072 | 12 |
| 49 | 79343754 | 6477   | 92301618 | 1418   | 11 |
| 50 | 79530231 | 7341   | 92553036 | 2723   | 10 |
| 51 | 79717572 | 8211   | 92805759 | 4116   | 9  |
| 52 | 79905783 | 9086   | 93059875 | 5486   | 8  |
| 53 | 80094869 | 9966   | 93315361 | 6877   | 7  |
| 54 | 80284835 | 190853 | 93572238 | 8357   | 6  |
| 55 | 80475688 | 1747   | 93830595 | 9675   | 5  |
| 56 | 80667435 | 2648   | 94090270 | 261178 | 4  |
| 57 | 80860083 | 3556   | 94351448 | 2607   | 3  |
| 58 | 81053639 | 4471   | 94614055 | 4048   | 2  |
| 59 | 81248110 | 195392 | 94878103 | 265508 | 1  |
| 60 | 81443502 |        | 95143611 |        | 0  |
| 7  |          |        | 6        |        |    |



| 84 |           |        | 85        |        |    |
|----|-----------|--------|-----------|--------|----|
| 0  | 95143611  | 266974 | 114300579 | 384240 | 60 |
| 1  | 95410585  | 8449   | 114684819 | 6800   | 59 |
| 2  | 95679034  | 9937   | 115071619 | 9386   | 58 |
| 3  | 95948971  | 271440 | 115461005 | 392012 | 57 |
| 4  | 96220411  | 3056   | 115853017 | 4651   | 56 |
| 5  | 96493467  | 4472   | 116247668 | 7317   | 55 |
| 6  | 96767939  | 6124   | 116644985 | 400010 | 54 |
| 7  | 97044063  | 7583   | 117044995 | 2869   | 53 |
| 8  | 97321646  | 9244   | 117447864 | 5482   | 52 |
| 9  | 97600890  | 280826 | 117853346 | 8411   | 51 |
| 10 | 97881716  | 2419   | 118261757 | 411077 | 50 |
| 11 | 98164135  | 4027   | 118672834 | 4056   | 49 |
| 12 | 98448162  | 5648   | 119086890 | 6779   | 48 |
| 13 | 98733810  | 7294   | 119503669 | 9819   | 47 |
| 14 | 99021104  | 8943   | 119923488 | 422745 | 46 |
| 15 | 99310047  | 290608 | 120346233 | 5704   | 45 |
| 16 | 99600655  | 2387   | 120771937 | 8706   | 44 |
| 17 | 99893042  | 3980   | 121200643 | 431727 | 43 |
| 18 | 100187022 | 5800   | 121632370 | 4781   | 42 |
| 19 | 100482822 | 7524   | 122067151 | 7866   | 41 |
| 20 | 100780346 | 9161   | 122505017 | 440986 | 40 |
| 21 | 101079507 | 301018 | 122946003 | 4139   | 39 |
| 22 | 101380525 | 2789   | 123390142 | 7492   | 38 |
| 23 | 101683314 | 4575   | 123837634 | 450561 | 37 |
| 24 | 101987889 | 6377   | 124288195 | 3974   | 36 |
| 25 | 102294266 | 8207   | 124742169 | 7111   | 35 |
| 26 | 102602473 | 310041 | 125199280 | 460598 | 34 |
| 27 | 102912514 | 1891   | 125659878 | 3964   | 33 |
| 28 | 103224405 | 3761   | 126123842 | 7369   | 32 |
| 29 | 103538166 | 315753 | 126591211 | 470825 | 31 |
| 30 | 103853919 |        | 127062036 |        | 30 |
| 5  |           |        | 4         |        |    |



| 84 |           |        | 85        |        |    |
|----|-----------|--------|-----------|--------|----|
| 30 | 103853919 | 317549 | 127062036 | 474305 | 30 |
| 31 | 104171468 | 9587   | 127536341 | 7824   | 29 |
| 32 | 104491055 | 321526 | 128014165 | 481383 | 28 |
| 33 | 104812581 | 3482   | 128495548 | 4983   | 27 |
| 34 | 105136063 | 5456   | 128980531 | 8774   | 26 |
| 35 | 105461519 | 7450   | 129469305 | 492347 | 25 |
| 36 | 105788969 | 9459   | 129961652 | 6040   | 24 |
| 37 | 106118428 | 331489 | 130457692 | 9978   | 23 |
| 38 | 106449917 | 3549   | 130957670 | 503616 | 22 |
| 39 | 106783466 | 5732   | 131461286 | 7644   | 21 |
| 40 | 107119198 | 7704   | 131968930 | 511367 | 20 |
| 41 | 107456902 | 9810   | 132480297 | 5472   | 19 |
| 42 | 107796712 | 342055 | 132995769 | 9867   | 18 |
| 43 | 108138767 | 4085   | 133515636 | 523168 | 17 |
| 44 | 108482852 | 6381   | 134038804 | 7615   | 16 |
| 45 | 108829233 | 8577   | 134566419 | 531734 | 15 |
| 46 | 109177805 | 350784 | 135098153 | 5943   | 14 |
| 47 | 109528589 | 3009   | 135634096 | 540176 | 13 |
| 48 | 109881598 | 5266   | 136174272 | 4459   | 12 |
| 49 | 110236864 | 7551   | 136718731 | 8792   | 11 |
| 50 | 110594415 | 9849   | 137267523 | 553179 | 10 |
| 51 | 110954264 | 362168 | 137820702 | 7617   | 9  |
| 52 | 111316432 | 4508   | 138378319 | 562110 | 8  |
| 53 | 111680940 | 6874   | 138940429 | 6658   | 7  |
| 54 | 112047814 | 9388   | 139507087 | 571458 | 6  |
| 55 | 112417202 | 371676 | 140078545 | 5936   | 5  |
| 56 | 112788878 | 4178   | 140654481 | 580853 | 4  |
| 57 | 113163656 | 6625   | 141235334 | 5431   | 3  |
| 58 | 113539681 | 9194   | 141820765 | 590469 | 2  |
| 59 | 113918875 | 381704 | 142411234 | 5367   | 1  |
| 60 | 114300579 |        | 143006601 |        | 0  |
| 5  |           |        | 4         |        |    |



| 86 |           |        | 87        |         |    |
|----|-----------|--------|-----------|---------|----|
| 0  | 143006601 | 600342 | 190811200 | 1067963 | 60 |
| 1  | 143606943 | 5364   | 191879163 | 1079932 | 59 |
| 2  | 144212307 | 610450 | 192959095 | 92105   | 58 |
| 3  | 144822757 | 5601   | 194051200 | 1104485 | 57 |
| 4  | 145438358 | 620817 | 195155685 | 17461   | 56 |
| 5  | 146059175 | 6100   | 196273146 | 29908   | 55 |
| 6  | 146685275 | 631451 | 197403054 | 42939   | 54 |
| 7  | 147316726 | 6885   | 198545993 | 56198   | 53 |
| 8  | 147953611 | 642376 | 199702191 | 69687   | 52 |
| 9  | 148595987 | 8161   | 200871878 | 83827   | 51 |
| 10 | 149244148 | 653605 | 202055705 | 97382   | 50 |
| 11 | 149897753 | 9480   | 203253093 | 1211633 | 49 |
| 12 | 150557233 | 665068 | 204464726 | 26534   | 48 |
| 13 | 151222301 | 671161 | 205691260 | 40851   | 47 |
| 14 | 151893462 | 7119   | 206932111 | 56291   | 46 |
| 15 | 152570581 | 682906 | 208188402 | 71143   | 45 |
| 16 | 153253487 | 9242   | 209459545 | 87148   | 44 |
| 17 | 153942729 | 695429 | 210746693 | 1302578 | 43 |
| 18 | 154638158 | 701697 | 212049271 | 18943   | 42 |
| 19 | 155339855 | 8068   | 213368214 | 35871   | 41 |
| 20 | 156047923 | 714510 | 214704085 | 51937   | 40 |
| 21 | 156762433 | 721041 | 216056022 | 69485   | 39 |
| 22 | 157483474 | 7662   | 217425507 | 86898   | 38 |
| 23 | 158211136 | 734372 | 218812405 | 1404644 | 37 |
| 24 | 158945509 | 741244 | 220217049 | 22735   | 36 |
| 25 | 159686753 | 8017   | 221639784 | 41199   | 35 |
| 26 | 160434770 | 755079 | 223080983 | 60004   | 34 |
| 27 | 161189849 | 762456 | 224540987 | 79180   | 33 |
| 28 | 161952305 | 9393   | 226020167 | 98735   | 32 |
| 29 | 162721698 | 77696  | 227518902 | 1518682 | 31 |
| 30 | 163498660 |        | 229037584 |         | 30 |
| 3  |           |        | 2         |         |    |



| 86 |           |         | 87        |         |    |
|----|-----------|---------|-----------|---------|----|
| 30 | 163498660 | 784104  | 229037584 | 1539030 | 30 |
| 31 | 164282764 | 791887  | 230576614 | 59813   | 29 |
| 32 | 165074651 | 9255    | 232136427 | 80998   | 28 |
| 33 | 165873906 | 807266  | 233717425 | 1602616 | 27 |
| 34 | 166681172 | 815115  | 235320041 | 25244   | 26 |
| 35 | 167496287 | 822798  | 236945285 | 47216   | 25 |
| 36 | 168319085 | 831162  | 238592501 | 70213   | 24 |
| 37 | 169150247 | 9366    | 240262714 | 94307   | 23 |
| 38 | 169989613 | 847691  | 241957021 | 1717711 | 22 |
| 39 | 170837304 | 856157  | 243674732 | 42811   | 21 |
| 40 | 171693461 | 864737  | 245417543 | 67242   | 20 |
| 41 | 172558198 | 873443  | 247184785 | 83431   | 19 |
| 42 | 173431641 | 881284  | 248978216 | 1818951 | 18 |
| 43 | 174313925 | 891258  | 250797165 | 46290   | 17 |
| 44 | 175205183 | 900372  | 252643455 | 73633   | 16 |
| 45 | 176105555 | 909625  | 254517088 | 1900903 | 15 |
| 46 | 177015180 | 919039  | 256417991 | 30109   | 14 |
| 47 | 177934219 | 928587  | 258348100 | 59316   | 13 |
| 48 | 178862806 | 938279  | 260307416 | 89189   | 12 |
| 49 | 179801085 | 948452  | 262296605 | 2019753 | 11 |
| 50 | 180749537 | 958133  | 264316358 | 50346   | 10 |
| 51 | 181707670 | 968629  | 266366704 | 83051   | 9  |
| 52 | 182676299 | 978642  | 268449755 | 2115815 | 8  |
| 53 | 183654941 | 989476  | 270565570 | 49357   | 7  |
| 54 | 184644417 | 1000145 | 272714927 | 83706   | 6  |
| 55 | 185644562 | 1010640 | 274898633 | 2218883 | 5  |
| 56 | 186655202 | 1022005 | 277117516 | 45919   | 4  |
| 57 | 187677207 | 1033217 | 279372435 | 91869   | 3  |
| 58 | 188710414 | 1044614 | 281664304 | 2329705 | 2  |
| 59 | 189755028 | 1056172 | 283994009 | 68489   | 1  |
| 60 | 190811200 |         | 286362498 |         | 0  |
| 3  |           |         | 2         |         |    |



# CANON

| 88 |           |         |    |
|----|-----------|---------|----|
| 0  | 286362498 | 2408248 | 60 |
| 1  | 288770746 | 49018   | 59 |
| 2  | 291219764 | 90834   | 58 |
| 3  | 293710598 | 2533759 | 57 |
| 4  | 296244357 | 78667   | 56 |
| 5  | 298823024 | 2622863 | 55 |
| 6  | 201445987 | 69335   | 54 |
| 7  | 204115322 | 2717890 | 53 |
| 8  | 306833212 | 66865   | 52 |
| 9  | 309599077 | 2817114 | 51 |
| 10 | 312416191 | 67754   | 50 |
| 11 | 315283945 | 2920812 | 49 |
| 12 | 318204757 | 76380   | 48 |
| 13 | 321181137 | 3031446 | 47 |
| 14 | 324212583 | 90199   | 46 |
| 15 | 327302782 | 3148490 | 45 |
| 16 | 330451272 | 3240710 | 44 |
| 17 | 333661982 | 72485   | 43 |
| 18 | 336934467 | 3338277 | 42 |
| 19 | 340272744 | 3405203 | 41 |
| 20 | 343677949 | 72640   | 40 |
| 21 | 347150587 | 3544268 | 39 |
| 22 | 350695255 | 3617707 | 38 |
| 23 | 354312962 | 93062   | 37 |
| 24 | 358006024 | 3770764 | 36 |
| 25 | 361776788 | 3849600 | 35 |
| 26 | 365626388 | 3933674 | 34 |
| 27 | 369560062 | 4019137 | 33 |
| 28 | 373579199 | 4107415 | 32 |
| 29 | 377686614 | 4198674 | 31 |
| 30 | 381885288 |         | 30 |
| I  |           |         |    |



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|    |           |         |    |
|----|-----------|---------|----|
| 30 | 381885288 | 4292970 | 30 |
| 31 | 386178258 | 4390479 | 29 |
| 32 | 390568737 | 4491351 | 28 |
| 33 | 395060088 | 4595740 | 27 |
| 34 | 399655828 | 4703814 | 26 |
| 35 | 404359642 | 4815746 | 25 |
| 36 | 409175388 | 4935907 | 24 |
| 37 | 414111295 | 5045842 | 23 |
| 38 | 419159137 | 5176656 | 22 |
| 39 | 424335793 | 5306003 | 21 |
| 40 | 429641796 | 5440260 | 20 |
| 41 | 435082056 | 5579724 | 19 |
| 42 | 440661780 | 5724530 | 18 |
| 43 | 446386310 | 5875143 | 17 |
| 44 | 452261453 | 6031732 | 16 |
| 45 | 458293185 | 6194668 | 15 |
| 46 | 464487853 | 6364399 | 14 |
| 47 | 470852152 | 6541043 | 13 |
| 48 | 477393195 | 6725158 | 12 |
| 49 | 484118353 | 6919671 | 11 |
| 50 | 491038024 | 7117730 | 10 |
| 51 | 498155754 | 7326976 | 9  |
| 52 | 505482730 | 7548216 | 8  |
| 53 | 513030946 | 7774211 | 7  |
| 54 | 520805157 | 8016101 | 6  |
| 55 | 528821258 | 8263745 | 5  |
| 56 | 537085003 | 8525965 | 4  |
| 57 | 545610968 | 8803946 | 3  |
| 58 | 554414914 | 9089395 | 2  |
| 59 | 563504309 | 9395521 | 1  |
| 60 | 572899830 |         | 0  |

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M



|   |    | 89        |         | 88 |    |
|---|----|-----------|---------|----|----|
| O | O  | 572899830 | 1593677 | O  | 60 |
|   | 10 | 574493507 | 1605885 | 50 |    |
|   | 20 | 576099392 | 1614943 | 40 |    |
|   | 30 | 577714335 | 1620605 | 30 |    |
|   | 40 | 579334940 | 1633154 | 20 |    |
| I | 50 | 580968094 | 1642327 | 10 |    |
|   | O  | 582610421 | 1648221 | O  | 59 |
|   | 10 | 584258642 | 1656316 | 50 |    |
|   | 20 | 585914958 | 1675162 | 40 |    |
|   | 30 | 587590120 | 1676608 | 30 |    |
|   | 40 | 589266728 | 1689635 | 20 |    |
| 2 | 50 | 590956363 | 1699350 | 10 |    |
|   | O  | 592655713 | 1709148 | O  | 58 |
|   | 10 | 594364861 | 19031   | 50 |    |
|   | 20 | 596083892 | 25427   | 40 |    |
|   | 30 | 597809319 | 39098   | 30 |    |
|   | 40 | 599548417 | 39182   | 20 |    |
| 3 | 50 | 601297599 | 59416   | 10 |    |
|   | O  | 603057015 | 66080   | O  | 57 |
|   | 10 | 604823095 | 80132   | 50 |    |
|   | 20 | 606603227 | 86937   | 40 |    |
|   | 30 | 608390164 | 1801217 | 30 |    |
|   | 40 | 610191381 | 11912   | 20 |    |
| 4 | 50 | 612803293 | 22701   | 10 |    |
|   | O  | 613825994 | 29735   | O  | 56 |
|   | 10 | 615655729 | 44549   | 50 |    |
|   | 20 | 617500278 | 55631   | 40 |    |
|   | 30 | 619355909 | 1866815 | 30 |    |
|   | 40 | 621222724 | 78100   | 20 |    |
| 5 | 50 | 623100824 | 89487   | 10 |    |
|   | O  | 624990311 |         | O  | 55 |
|   | O  |           |         |    |    |



89

|    |    |           |         |    |    |
|----|----|-----------|---------|----|----|
| 5  | 0  | 624990311 | 1897048 | 0  | 55 |
|    | 10 | 626887359 | 1912487 | 50 |    |
|    | 20 | 628799846 | 24190   | 40 |    |
|    | 30 | 630724036 | 32060   | 30 |    |
|    | 40 | 632656096 | 47957   | 20 |    |
| 6  | 50 | 634604053 | 59987   | 10 |    |
|    | 0  | 636564040 | 72128   | 0  | 54 |
|    | 10 | 638536168 | 84318   | 50 |    |
|    | 20 | 640520486 | 92623   | 40 |    |
|    | 30 | 642513109 | 2009146 | 30 |    |
|    | 40 | 644522255 | 21812   | 20 |    |
| 7  | 50 | 646544067 | 47442   | 10 |    |
|    | 0  | 648591509 | 54337   | 0  | 53 |
|    | 10 | 650625846 | 60273   | 50 |    |
|    | 20 | 652686119 | 69138   | 40 |    |
|    | 30 | 654755257 | 86544   | 30 |    |
|    | 40 | 656841801 | 1099949 | 20 |    |
| 8  | 50 | 658941750 | 2108978 | 10 |    |
|    | 0  | 661050728 | 2126917 | 0  | 52 |
|    | 10 | 663177645 | 40712   | 50 |    |
|    | 20 | 665318357 | 50051   | 40 |    |
|    | 30 | 667468408 | 68474   | 30 |    |
|    | 40 | 669636882 | 82674   | 20 |    |
| 9  | 50 | 671819556 | 96879   | 10 |    |
|    | 0  | 674016435 | 2211289 | 0  | 51 |
|    | 10 | 676227724 | 25844   | 50 |    |
|    | 20 | 678453568 | 35977   | 40 |    |
|    | 30 | 680689545 | 55356   | 30 |    |
|    | 40 | 682944901 | 70349   | 20 |    |
| 19 | 50 | 685215250 | 85475   | 10 |    |
|    | 0  | 687500725 |         | 0  | 50 |

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|    |    |           |         |    |    |
|----|----|-----------|---------|----|----|
| IO | 0  | 687500725 | 2300784 | 0  | 50 |
|    | 10 | 689801523 | 16232   | 50 |    |
|    | 20 | 692117755 | 27013   | 40 |    |
|    | 30 | 694444768 | 47566   | 30 |    |
|    | 40 | 696792334 | 58600   | 20 |    |
| II | 50 | 699150934 | 79540   | 10 |    |
|    | 0  | 701531474 | 94718   | 0  | 49 |
|    | 10 | 703926192 | 2412206 | 50 |    |
|    | 20 | 706338398 | 23767   | 40 |    |
|    | 30 | 708762165 | 45513   | 30 |    |
|    | 40 | 711207678 | 62445   | 20 |    |
| I2 | 50 | 713670123 | 79553   | 10 |    |
|    | 0  | 716149676 | 91601   | 0  | 48 |
|    | 10 | 718641277 | 2514269 | 50 |    |
|    | 20 | 721155546 | 26683   | 40 |    |
|    | 30 | 723682229 | 49649   | 30 |    |
|    | 40 | 726231878 | 67748   | 20 |    |
| I3 | 50 | 728799626 | 85967   | 10 |    |
|    | 0  | 731385593 | 2604306 | 0  | 47 |
|    | 10 | 733989899 | 17563   | 50 |    |
|    | 20 | 736607462 | 41687   | 40 |    |
|    | 30 | 739249149 | 60774   | 30 |    |
|    | 40 | 741909923 | 79919   | 20 |    |
| I4 | 50 | 744589842 | 99422   | 10 |    |
|    | 0  | 747289264 | 2778986 | 0  | 46 |
|    | 10 | 750008250 | 33175   | 50 |    |
|    | 20 | 752741425 | 58949   | 40 |    |
|    | 30 | 755500374 | 79243   | 30 |    |
|    | 40 | 758279617 | 99686   | 20 |    |
| I5 | 50 | 761079303 | 2820510 | 10 |    |
|    | 0  | 763899813 |         | 0  | 45 |
| 0  |    |           |         |    |    |



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|    |    |           |         |    |    |
|----|----|-----------|---------|----|----|
| I5 | 0  | 763899813 | 2841489 | 0  | 45 |
|    | 10 | 766741302 | 56703   | 50 |    |
|    | 20 | 769598005 | 84033   | 40 |    |
|    | 30 | 772482038 | 2905804 | 30 |    |
|    | 40 | 775387842 | 29391   | 20 |    |
| I6 | 50 | 778317233 | 42026   | 10 |    |
|    | 0  | 781259259 | 72249   | 0  | 44 |
|    | 10 | 784231508 | 94948   | 50 |    |
|    | 20 | 787226456 | 3011740 | 40 |    |
|    | 30 | 790238196 | 41084   | 30 |    |
|    | 40 | 793279280 | 64576   | 20 |    |
| I7 | 50 | 796343856 | 88343   | 10 |    |
|    | 0  | 799432199 | 3112385 | 0  | 43 |
|    | 10 | 802544584 | 30220   | 50 |    |
|    | 20 | 805674804 | 61272   | 40 |    |
|    | 30 | 808836076 | 79580   | 30 |    |
|    | 40 | 812015656 | 3211320 | 20 |    |
| I8 | 50 | 815226976 | 36816   | 10 |    |
|    | 0  | 818463792 | 62618   | 0  | 42 |
|    | 10 | 821726410 | 88730   | 50 |    |
|    | 20 | 825015140 | 3308294 | 40 |    |
|    | 30 | 828323434 | 41763   | 30 |    |
|    | 40 | 831665197 | 61763   | 20 |    |
| I9 | 50 | 835034113 | 96325   | 10 |    |
|    | 0  | 838430438 | 3423961 | 0  | 41 |
|    | 10 | 841854399 | 52130   | 50 |    |
|    | 20 | 845306529 | 73265   | 40 |    |
|    | 30 | 848779794 | 3509271 | 30 |    |
|    | 40 | 852289065 | 38405   | 20 |    |
| 20 | 50 | 855827470 | 67904   | 10 |    |
|    | 0  | 859395374 |         | 0  | 40 |
| 0  |    |           |         |    |    |



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|    |    |           |         |    |    |
|----|----|-----------|---------|----|----|
| 20 | 0  | 859395374 | 3590238 | 0  | 40 |
|    | 10 | 862985612 | 3627869 | 50 |    |
|    | 20 | 866613481 | 51009   | 40 |    |
|    | 30 | 870264490 | 89449   | 30 |    |
|    | 40 | 873953939 | 3720949 | 20 |    |
| 21 | 50 | 877674888 | 52764   | 10 |    |
|    | 0  | 881427652 | 84901   | 0  | 39 |
|    | 10 | 885212553 | 3817542 | 50 |    |
|    | 20 | 889030095 | 42725   | 40 |    |
|    | 30 | 892872820 | 84125   | 30 |    |
|    | 40 | 896756945 | 3917972 | 20 |    |
| 22 | 50 | 900674917 | 52444   | 10 |    |
|    | 0  | 904627361 | 87190   | 0  | 38 |
|    | 10 | 908614551 | 4022672 | 50 |    |
|    | 20 | 912637223 | 43733   | 40 |    |
|    | 30 | 916680956 | 4100465 | 30 |    |
|    | 40 | 920781421 | 29197   | 20 |    |
| 23 | 50 | 924910618 | 70468   | 10 |    |
|    | 0  | 929081086 | 4200060 | 0  | 37 |
|    | 10 | 933281146 | 50474   | 50 |    |
|    | 20 | 937531620 | 74421   | 40 |    |
|    | 30 | 941806041 | 4322374 | 30 |    |
|    | 40 | 946128415 | 4362255 | 20 |    |
| 24 | 50 | 950490670 | 4402662 | 10 |    |
|    | 0  | 954893332 | 4443634 | 0  | 36 |
|    | 10 | 959336966 | 4485179 | 50 |    |
|    | 20 | 963822145 | 4517934 | 40 |    |
|    | 30 | 968340079 | 4569951 | 30 |    |
|    | 40 | 972910030 | 4613285 | 20 |    |
| 25 | 50 | 977523315 | 4657238 | 10 |    |
|    | 0  | 982180553 |         | 0  | 35 |
| 0  |    |           |         |    |    |



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|    |    |            |         |    |    |
|----|----|------------|---------|----|----|
| 25 | 0  | 982180553  | 4701824 | 0  | 35 |
|    | 10 | 986882377  | 4747052 | 50 |    |
|    | 20 | 991629429  | 4782907 | 40 |    |
|    | 30 | 996412336  | 4839411 | 30 |    |
|    | 40 | 1001251744 | 4876480 | 20 |    |
| 26 | 50 | 1006128227 | 4934452 | 10 | 34 |
|    | 0  | 1011062679 | 4983085 | 0  |    |
|    | 10 | 1016045764 | 5032342 | 50 |    |
|    | 20 | 1021078106 | 5071903 | 40 |    |
|    | 30 | 1026150009 | 5133277 | 30 |    |
|    | 40 | 1031283286 | 5184887 | 20 |    |
| 27 | 50 | 1036468173 | 5237281 | 10 | 33 |
|    | 0  | 1041705454 | 5290368 | 0  |    |
|    | 10 | 1046995822 | 5344372 | 50 |    |
|    | 20 | 1052340194 | 5388126 | 40 |    |
|    | 30 | 1057728320 | 5354885 | 30 |    |
|    | 40 | 1063183205 | 5511327 | 20 |    |
| 28 | 50 | 1068694532 | 5568877 | 10 | 32 |
|    | 0  | 1074263399 | 5627095 | 0  |    |
|    | 10 | 1079890494 | 5686395 | 50 |    |
|    | 20 | 1085576889 | 5734813 | 40 |    |
|    | 30 | 1091311702 | 5807581 | 30 |    |
|    | 40 | 1097119283 | 5869719 | 20 |    |
| 29 | 50 | 1102989002 | 5933082 | 10 | 31 |
|    | 0  | 1108922084 | 5997025 | 0  |    |
|    | 10 | 1114919109 | 6062237 | 50 |    |
|    | 20 | 1120981346 | 6115819 | 40 |    |
|    | 30 | 1127097165 | 6195859 | 30 |    |
|    | 40 | 1133293024 | 6264240 | 20 |    |
| 30 | 50 | 1139557264 | 6333372 | 10 | 30 |
|    | 0  | 1145891136 |         | 0  |    |



|    |    |            |         |    |    |
|----|----|------------|---------|----|----|
| 30 | 0  | 1145891136 | 6404899 | 0  | 30 |
|    | 10 | 1152296035 | 6463119 | 50 |    |
|    | 20 | 1158759154 | 6549722 | 40 |    |
|    | 30 | 1165308876 | 6624180 | 30 |    |
|    | 40 | 1171933056 | 6686028 | 20 |    |
|    | 50 | 1178619080 | 6776797 | 10 |    |
| 31 | 0  | 1185395877 | 6855172 | 0  | 29 |
|    | 10 | 1192251049 | 6934915 | 50 |    |
|    | 20 | 1199185964 | 7001508 | 40 |    |
|    | 30 | 1206187472 | 7098460 | 30 |    |
|    | 40 | 1213285932 | 7182499 | 20 |    |
|    | 50 | 1220468431 | 7268039 | 10 |    |
| 32 | 0  | 1227736470 | 7355115 | 0  | 28 |
|    | 10 | 1235091585 | 7443778 | 50 |    |
|    | 20 | 1242535363 | 7518391 | 40 |    |
|    | 30 | 1250053754 | 7625628 | 30 |    |
|    | 40 | 1257679382 | 7719357 | 20 |    |
|    | 50 | 1265398739 | 7814696 | 10 |    |
| 33 | 0  | 1273213435 | 7911683 | 0  | 27 |
|    | 10 | 1281125118 | 8010748 | 50 |    |
|    | 20 | 1289135866 | 8094723 | 40 |    |
|    | 30 | 1297230589 | 8213928 | 30 |    |
|    | 40 | 1305444517 | 8318736 | 20 |    |
|    | 50 | 1313763253 | 8425428 | 10 |    |
| 34 | 0  | 1322188681 | 8534055 | 0  | 26 |
|    | 10 | 1330722736 | 8645065 | 50 |    |
|    | 20 | 1339367801 | 8739673 | 40 |    |
|    | 30 | 1348107474 | 8873432 | 30 |    |
|    | 40 | 1356980906 | 8990599 | 20 |    |
|    | 50 | 1365971505 | 9110658 | 10 |    |
| 35 | 0  | 1375082163 |         | 0  | 25 |



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|    |    |            |          |    |    |
|----|----|------------|----------|----|----|
| 35 | 0  | 1375082163 | 9232998  | 0  | 25 |
|    | 10 | 1384315161 | 9338256  | 50 |    |
|    | 20 | 1393653417 | 9484782  | 40 |    |
|    | 30 | 1403138199 | 9614902  | 30 |    |
|    | 40 | 1412753101 | 9727197  | 20 |    |
|    | 50 | 1422480298 | 9882729  | 10 |    |
| 36 | 0  | 1432363027 | 10020858 | 0  | 24 |
|    | 10 | 1442383885 | 10162053 | 50 |    |
|    | 20 | 1452545938 | 10284998 | 40 |    |
|    | 30 | 1462830936 | 10453237 | 30 |    |
|    | 40 | 1473284173 | 10603850 | 20 |    |
|    | 50 | 1483888023 | 10757439 | 10 |    |
| 37 | 0  | 1494645462 | 10914543 | 0  | 23 |
|    | 10 | 1505560005 | 11075115 | 50 |    |
|    | 20 | 1516635120 | 11216064 | 40 |    |
|    | 30 | 1527851184 | 11406724 | 30 |    |
|    | 40 | 1539257908 | 11578724 | 20 |    |
|    | 50 | 1550836228 | 11753818 | 10 |    |
| 38 | 0  | 1562590046 | 11933336 | 0  | 22 |
|    | 10 | 1574523382 | 12116999 | 50 |    |
|    | 20 | 1586640381 | 12279368 | 40 |    |
|    | 30 | 1598919749 | 12496874 | 30 |    |
|    | 40 | 1611416623 | 12693754 | 20 |    |
|    | 50 | 1624110377 | 12895320 | 10 |    |
| 39 | 0  | 1637005697 | 13101562 | 0  | 21 |
|    | 10 | 1650107259 | 13313128 | 50 |    |
|    | 20 | 1663420387 | 13501567 | 40 |    |
|    | 30 | 1676921954 | 13751115 | 30 |    |
|    | 40 | 1690673069 | 13978494 | 20 |    |
|    | 50 | 1704651563 | 14211561 | 10 |    |
| 40 | 0  | 1718863124 |          | 0  | 20 |

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|    |    |            |          |    |    |
|----|----|------------|----------|----|----|
| 40 | 0  | 1718863124 | 14450507 | 0  | 20 |
|    | 10 | 1733313631 | 14695528 | 50 |    |
|    | 20 | 1748009159 | 14915580 | 40 |    |
|    | 30 | 1762924739 | 15204106 | 30 |    |
|    | 40 | 1778128845 | 15468450 | 20 |    |
| 41 | 50 | 1793597295 | 15740115 | 10 |    |
|    | 0  | 1809337410 | 16018631 | 0  | 19 |
|    | 10 | 1825356041 | 16304978 | 50 |    |
|    | 20 | 1841661019 | 16564350 | 40 |    |
|    | 30 | 1858225369 | 16899985 | 30 |    |
|    | 40 | 1875125354 | 17626709 | 20 |    |
| 42 | 50 | 1892752063 | 17112908 | 10 |    |
|    | 0  | 1909864971 | 17856816 | 0  | 18 |
|    | 10 | 1927721787 | 18194070 | 50 |    |
|    | 20 | 1945915857 | 18501980 | 40 |    |
|    | 30 | 1964417837 | 18896721 | 30 |    |
|    | 40 | 1983314558 | 19263593 | 20 |    |
| 43 | 50 | 2002578151 | 19641667 | 10 |    |
|    | 0  | 2022219818 | 20030771 | 0  | 17 |
|    | 10 | 2042250589 | 20431135 | 50 |    |
|    | 20 | 2062681724 | 20801066 | 40 |    |
|    | 30 | 2083482790 | 21268952 | 30 |    |
|    | 40 | 2104751742 | 21707876 | 20 |    |
| 44 | 50 | 2126459618 | 22160093 | 10 |    |
|    | 0  | 2148619711 | 22626815 | 0  | 16 |
|    | 10 | 2171246526 | 23108436 | 50 |    |
|    | 20 | 2194354962 | 23556409 | 40 |    |
|    | 30 | 2217911371 | 24118134 | 30 |    |
|    | 40 | 2242029505 | 24648193 | 20 |    |
| 45 | 50 | 2266677698 | 25196156 | 10 |    |
|    | 0  | 2291873854 |          | 0  | 15 |

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|    |    |            |          |    |    |
|----|----|------------|----------|----|----|
| 45 | 0  | 2291873854 | 25655196 | 0  | 15 |
|    | 10 | 2317529050 | 26345879 | 50 |    |
|    | 20 | 2343874929 | 26951786 | 40 |    |
|    | 30 | 2370826715 | 27578811 | 30 |    |
|    | 40 | 2398405526 | 28227976 | 20 |    |
| 46 | 50 | 2426633502 | 28900336 | 10 |    |
|    | 0  | 2455533838 | 29597005 | 0  | 14 |
|    | 10 | 2485130843 | 30319174 | 50 |    |
|    | 20 | 2515450017 | 31003001 | 40 |    |
|    | 30 | 2546453018 | 31843488 | 30 |    |
|    | 40 | 2578296506 | 32649968 | 20 |    |
| 47 | 50 | 2610946475 | 33487480 | 10 |    |
|    | 0  | 2644433955 | 34357633 | 0  | 13 |
|    | 10 | 2678791588 | 35262151 | 50 |    |
|    | 20 | 2714053739 | 36127224 | 40 |    |
|    | 30 | 2750180963 | 37179668 | 30 |    |
|    | 40 | 2787360631 | 38198692 | 20 |    |
| 48 | 50 | 2825559323 | 39259906 | 10 |    |
|    | 0  | 2864819229 | 40366559 | 0  | 12 |
|    | 10 | 2905185788 | 41520070 | 50 |    |
|    | 20 | 2946705858 | 42634988 | 40 |    |
|    | 30 | 2989340846 | 43978837 | 30 |    |
|    | 40 | 3033319683 | 45291856 | 20 |    |
| 49 | 50 | 3078611539 | 46665206 | 10 |    |
|    | 0  | 3125276745 | 48101650 | 0  | 11 |
|    | 10 | 3173378395 | 49605458 | 50 |    |
|    | 20 | 3222983853 | 51073378 | 40 |    |
|    | 30 | 3274057231 | 52828789 | 30 |    |
|    | 40 | 3326886020 | 54561584 | 20 |    |
| 50 | 50 | 3381447604 | 56381398 | 10 |    |
|    | 0  | 3437829002 |          | 0  | 10 |

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|    |    |            |           |    |    |
|----|----|------------|-----------|----|----|
| 50 | 0  | 3437829002 | 58170858  | 0  | 10 |
|    | 10 | 3495999860 | 60300150  | 50 |    |
|    | 20 | 3556300010 | 62285479  | 40 |    |
|    | 30 | 3618585489 | 64641767  | 30 |    |
|    | 40 | 3683227256 | 66993633  | 20 |    |
| 51 | 50 | 3750220889 | 69475444  | 10 |    |
|    | 0  | 3819696333 | 72098180  | 0  | 9  |
|    | 10 | 3891794513 | 74872285  | 50 |    |
|    | 20 | 3966666798 | 77686919  | 40 |    |
|    | 30 | 4044353717 | 80876265  | 30 |    |
|    | 40 | 4125229982 | 84220683  | 20 |    |
| 52 | 50 | 4209450665 | 87731235  | 10 |    |
|    | 0  | 4297181900 | 91465954  | 0  | 8  |
|    | 10 | 4388647884 | 95444339  | 50 |    |
|    | 20 | 4484092193 | 99477958  | 40 |    |
|    | 30 | 4583570151 | 104211585 | 30 |    |
|    | 40 | 4687781736 | 109060495 | 20 |    |
| 53 | 50 | 4796842231 | 114255893 | 10 |    |
|    | 0  | 4911098124 | 119831594 | 0  | 7  |
|    | 10 | 5030929718 | 125825645 | 50 |    |
|    | 20 | 5156755363 | 132001248 | 40 |    |
|    | 30 | 5288756611 | 139231230 | 30 |    |
|    | 40 | 5427987841 | 146760180 | 20 |    |
| 54 | 50 | 5574788021 | 154885818 | 10 |    |
|    | 0  | 5729633839 | 163803808 | 0  | 6  |
|    | 10 | 5893437647 | 173410621 | 50 |    |
|    | 20 | 6066848268 | 183534256 | 40 |    |
|    | 30 | 6250382524 | 195400639 | 30 |    |
|    | 40 | 6445783163 | 208012166 | 20 |    |
| 55 | 50 | 6653795329 | 221884677 | 10 |    |
|    | 0  | 6875680006 |           | 0  | 5  |
| 0  |    |            |           |    |    |



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|    |    |                  |            |    |   |
|----|----|------------------|------------|----|---|
| 55 | 0  | 6875680006       | 237194309  | 0  | 5 |
|    | 10 | 7112874315       | 253601560  | 50 |   |
|    | 20 | 7366475875       | 272363855  | 40 |   |
|    | 30 | 7638839730       | 293884369  | 30 |   |
|    | 40 | 7932724099       | 317414503  | 20 |   |
| 56 | 50 | 8250138602       | 343865351  | 10 |   |
|    | 0  | 8594003953       | 373796244  | 0  | 4 |
|    | 10 | 8967800197       | 407780151  | 50 |   |
|    | 20 | 9375580348       | 445667933  | 40 |   |
|    | 30 | 9821248281       | 491214336  | 30 |   |
|    | 40 | 10312462617      | 542939033  | 20 |   |
| 57 | 50 | 10855401650      | 602127856  | 10 |   |
|    | 0  | 11457529506      | 675443073  | 0  | 3 |
|    | 10 | 12132972579      | 756943636  | 50 |   |
|    | 20 | 12889916215      | 859564055  | 40 |   |
|    | 30 | 13749480270      | 982395098  | 30 |   |
|    | 40 | 14731875368      | 1133582350 | 20 |   |
| 58 | 50 | 15865457718      | 1322575970 | 10 |   |
|    | 0  | 17188033688      | 1563134510 | 0  | 2 |
|    | 10 | 18751168198      | 1875890383 | 50 |   |
|    | 20 | 20627058581      | 2287696231 | 40 |   |
|    | 30 | 22914754812      | 2865082775 | 30 |   |
|    | 40 | 25779837587      | 3683919042 | 20 |   |
| 59 | 50 | 29463756629      | 4912314186 | 10 |   |
|    | 0  | 34376070815      | 6878050472 | 0  | I |
|    | 10 | 41254121287      |            | 50 |   |
|    | 20 | 51572970603      |            | 40 |   |
|    | 30 | 68728522337      |            | 30 |   |
|    | 40 | 103092783505     |            | 20 |   |
| 60 | 50 | 206185567010     |            | 10 |   |
|    | 0  | 1000000000000000 |            | 0  | 6 |
| 0  |    |                  |            |    |   |







# SEQVITVR

CANON MEDIA

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ralis.



# CANON MEDIATIONVM

| V $\frac{1}{2}$         |  |   |  |    |  |            |  |                                 |  |            |  |
|-------------------------|--|---|--|----|--|------------|--|---------------------------------|--|------------|--|
| Radix ascensio-<br>num. |  |   |  |    |  | Dra<br>Ad. |  | Numerus<br>multipli-<br>candus. |  | Dra<br>Ad. |  |
| par                     |  | / |  | // |  | par.       |  | /                               |  | //         |  |
| 0                       |  | 0 |  | 0  |  | 180        |  | 0                               |  | 0          |  |
| 10                      |  | 0 |  | 10 |  | 54         |  | 180                             |  | 10         |  |
| 20                      |  | 0 |  | 21 |  | 48         |  | 180                             |  | 21         |  |
| 30                      |  | 0 |  | 32 |  | 42         |  | 180                             |  | 32         |  |
| 40                      |  | 0 |  | 43 |  | 36         |  | 180                             |  | 43         |  |
| 50                      |  | 0 |  | 54 |  | 30         |  | 180                             |  | 54         |  |
| I                       |  | 1 |  | 5  |  | 24         |  | 181                             |  | 5          |  |
| 10                      |  | 1 |  | 16 |  | 18         |  | 181                             |  | 16         |  |
| 20                      |  | 1 |  | 27 |  | 12         |  | 181                             |  | 27         |  |
| 30                      |  | 1 |  | 38 |  | 6          |  | 181                             |  | 38         |  |
| 40                      |  | 1 |  | 49 |  | 0          |  | 181                             |  | 49         |  |
| 50                      |  | 1 |  | 59 |  | 54         |  | 181                             |  | 59         |  |
| 2                       |  | 2 |  | 10 |  | 48         |  | 182                             |  | 10         |  |
| 10                      |  | 2 |  | 21 |  | 42         |  | 182                             |  | 21         |  |
| 20                      |  | 2 |  | 32 |  | 36         |  | 182                             |  | 32         |  |
| 30                      |  | 2 |  | 43 |  | 30         |  | 182                             |  | 43         |  |
| 40                      |  | 2 |  | 54 |  | 24         |  | 182                             |  | 54         |  |
| 50                      |  | 3 |  | 5  |  | 18         |  | 183                             |  | 5          |  |
| 3                       |  | 3 |  | 16 |  | 11         |  | 183                             |  | 16         |  |



V  $\frac{1}{2}$ 

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli- | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|----------------------|------------|
|    | par                     | /  | // | par. | /  | // | /          | // |                      |            |
| 3  | 3                       | 16 | 11 | 183  | 16 | 11 | 0          | 35 | 4334139              | 83046      |
| 10 | 3                       | 27 | 5  | 183  | 27 | 5  | 0          | 37 | 4333332              | 83026      |
|    |                         | 10 | 54 |      |    |    |            | 2  | 850                  | 21         |
| 20 | 3                       | 37 | 59 | 183  | 37 | 59 | 0          | 39 | 4332482              | 83005      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 894                  | 23         |
| 30 | 3                       | 48 | 52 | 183  | 48 | 52 | 0          | 41 | 4331588              | 82982      |
|    |                         | 10 | 54 |      |    |    |            | 2  | 937                  | 24         |
| 40 | 3                       | 59 | 46 | 183  | 59 | 46 | 0          | 43 | 4330651              | 82958      |
|    |                         | 10 | 54 |      |    |    |            | 2  | 980                  | 25         |
| 50 | 4                       | 10 | 40 | 184  | 10 | 40 | 0          | 45 | 4329671              | 82933      |
|    |                         | 10 | 52 |      |    |    |            | 2  | 1024                 | 26         |
| 4  | 4                       | 21 | 33 | 184  | 21 | 33 | 0          | 47 | 4328647              | 82907      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1067                 | 27         |
| 10 | 4                       | 32 | 26 | 184  | 32 | 26 | 0          | 49 | 4327580              | 82880      |
|    |                         | 10 | 54 |      |    |    |            | 2  | 1110                 | 28         |
| 20 | 4                       | 43 | 20 | 184  | 43 | 20 | 0          | 51 | 4326470              | 82852      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1154                 | 29         |
| 30 | 4                       | 54 | 13 | 184  | 54 | 13 | 0          | 53 | 4325316              | 82823      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1197                 | 31         |
| 40 | 5                       | 5  | 6  | 185  | 5  | 6  | 0          | 55 | 4324119              | 82792      |
|    |                         | 10 | 54 |      |    |    |            | 2  | 1240                 | 32         |
| 50 | 5                       | 16 | 0  | 185  | 16 | 0  | 0          | 57 | 4322879              | 82760      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1283                 | 33         |
| 5  | 5                       | 26 | 53 | 185  | 26 | 53 | 0          | 59 | 4321596              | 82727      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1327                 | 34         |
| 10 | 5                       | 37 | 46 | 185  | 37 | 46 | 1          | 1  | 4320269              | 82693      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1370                 | 35         |
| 20 | 5                       | 48 | 39 | 185  | 48 | 39 | 1          | 3  | 4318899              | 82688      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1413                 | 36         |
| 30 | 5                       | 59 | 32 | 185  | 59 | 32 | 1          | 5  | 4317486              | 82622      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1456                 | 37         |
| 40 | 6                       | 10 | 25 | 186  | 10 | 25 | 1          | 7  | 4316030              | 82585      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1499                 | 38         |
| 50 | 6                       | 21 | 18 | 186  | 21 | 18 | 1          | 9  | 4314531              | 82547      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1542                 | 39         |
| 6  | 6                       | 32 | 11 | 186  | 32 | 11 | 1          | 11 | 4312989              | 82508      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1585                 | 40         |



# CANON MEDIATIONVM

| V $\frac{1}{2}$         |  |     |    |    |     |            |    |                                 |    |            |       |
|-------------------------|--|-----|----|----|-----|------------|----|---------------------------------|----|------------|-------|
| Radix ascensio-<br>num. |  |     |    |    |     | Dra<br>Ad. |    | Numerus<br>multipli-<br>candus. |    | Dra<br>Ad. |       |
|                         |  | par | /  | // | par | /          | // |                                 |    |            |       |
|                         |  |     |    |    |     |            |    |                                 |    |            |       |
| 6                       |  | 6   | 32 | 11 | 186 | 32         | 11 | 1                               | 11 | 4312989    | 82508 |
| 10                      |  | 6   | 43 | 4  | 186 | 43         | 4  | 1                               | 13 | 4311404    | 82468 |
|                         |  |     | 10 | 52 |     |            |    |                                 | 2  | 1628       | 41    |
| 20                      |  | 6   | 53 | 56 | 186 | 53         | 56 | 1                               | 15 | 4309776    | 82427 |
|                         |  |     | 10 | 53 |     |            |    |                                 | 2  | 1671       | 42    |
| 30                      |  | 7   | 4  | 49 | 187 | 4          | 49 | 1                               | 17 | 4308105    | 82385 |
|                         |  |     | 10 | 52 |     |            |    |                                 | 2  | 1715       | 43    |
| 40                      |  | 7   | 15 | 41 | 187 | 15         | 51 | 1                               | 19 | 4306390    | 82342 |
|                         |  |     | 10 | 52 |     |            |    |                                 | 2  | 1758       | 44    |
| 50                      |  | 7   | 26 | 33 | 187 | 26         | 33 | 1                               | 22 | 4304632    | 82298 |
|                         |  |     | 10 | 52 |     |            |    |                                 | 2  | 1800       | 46    |
| 7                       |  | 7   | 37 | 25 | 187 | 37         | 25 | 1                               | 24 | 4302832    | 82252 |
|                         |  |     | 10 | 52 |     |            |    |                                 | 2  | 1843       | 47    |
| 10                      |  | 7   | 48 | 17 | 187 | 48         | 17 | 1                               | 26 | 4300989    | 82205 |
|                         |  |     | 10 | 52 |     |            |    |                                 | 2  | 1886       | 48    |
| 20                      |  | 7   | 59 | 9  | 187 | 59         | 9  | 1                               | 28 | 4299103    | 82157 |
|                         |  |     | 10 | 52 |     |            |    |                                 | 2  | 1928       | 49    |
| 30                      |  | 8   | 10 | 1  | 188 | 10         | 1  | 1                               | 30 | 4297175    | 82108 |
|                         |  |     | 10 | 52 |     |            |    |                                 | 2  | 1971       | 50    |
| 40                      |  | 8   | 20 | 53 | 188 | 20         | 53 | 1                               | 32 | 4295204    | 82058 |
|                         |  |     | 10 | 52 |     |            |    |                                 | 2  | 2013       | 51    |
| 50                      |  | 8   | 31 | 45 | 188 | 31         | 45 | 1                               | 34 | 4293191    | 82007 |
|                         |  |     | 10 | 52 |     |            |    |                                 | 2  | 2056       | 52    |
| 8                       |  | 8   | 42 | 37 | 188 | 42         | 37 | 1                               | 36 | 4291135    | 81955 |
|                         |  |     | 10 | 52 |     |            |    |                                 | 2  | 2098       |       |
| 10                      |  | 8   | 53 | 29 | 188 | 53         | 29 | 1                               | 38 | 4289037    | 81902 |
|                         |  |     | 10 | 52 |     |            |    |                                 | 2  | 2141       |       |
| 20                      |  | 9   | 4  | 21 | 189 | 4          | 21 | 1                               | 40 | 4286896    | 81848 |
|                         |  |     | 10 | 52 |     |            |    |                                 | 2  | 2183       |       |
| 30                      |  | 9   | 15 | 13 | 189 | 15         | 13 | 1                               | 42 | 4284713    | 81793 |
|                         |  |     | 10 | 51 |     |            |    |                                 | 1  | 2226       |       |
| 40                      |  | 9   | 26 | 4  | 189 | 26         | 4  | 1                               | 43 | 4282487    | 81737 |
|                         |  |     | 10 | 51 |     |            |    |                                 | 2  | 2269       |       |
| 50                      |  | 9   | 36 | 55 | 189 | 36         | 55 | 1                               | 45 | 4280218    | 81680 |
|                         |  |     | 10 | 51 |     |            |    |                                 | 2  | 2311       |       |
| 9                       |  | 9   | 47 | 46 | 189 | 47         | 46 | 1                               | 47 | 4277907    | 81622 |
|                         |  |     | 10 | 51 |     |            |    |                                 |    | 2353       |       |



V  $\frac{1}{2}$ 

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli- | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|----------------------|------------|
|    | par                     | /  | // | par. | /  | // | /          | // |                      |            |
| 9  | 9                       | 47 | 46 | 189  | 47 | 46 | 1          | 47 | 4277907              | 81622      |
| 10 | 9                       | 58 | 37 | 189  | 58 | 37 | 1          | 49 | 4275554              | 81563      |
|    |                         | 10 | 51 |      |    |    |            | 2  | 2395                 | 60         |
| 20 | 10                      | 9  | 28 | 190  | 9  | 28 | 1          | 51 | 4273159              | 81503      |
|    |                         | 10 | 51 |      |    |    |            | 1  | 2437                 | 61         |
| 30 | 10                      | 20 | 19 | 190  | 20 | 19 | 1          | 52 | 4270722              | 81442      |
|    |                         | 10 | 51 |      |    |    |            | 2  | 2479                 | 62         |
| 40 | 10                      | 31 | 10 | 190  | 31 | 10 | 1          | 54 | 4268243              | 81380      |
|    |                         | 10 | 51 |      |    |    |            | 2  | 2521                 | 63         |
| 50 | 10                      | 42 | 1  | 190  | 42 | 1  | 1          | 56 | 4265722              | 81317      |
|    |                         | 10 | 50 |      |    |    |            | 2  | 2563                 | 64         |
| 10 | 10                      | 52 | 51 | 190  | 52 | 51 | 1          | 58 | 4263159              | 81253      |
|    |                         | 10 | 51 |      |    |    |            | 1  | 2605                 | 65         |
| 10 | 11                      | 3  | 42 | 191  | 3  | 42 | 1          | 59 | 4260554              | 81188      |
|    |                         | 10 | 50 |      |    |    |            | 2  | 2647                 | 66         |
| 20 | 11                      | 14 | 32 | 191  | 14 | 32 | 2          | 1  | 4257907              | 81122      |
|    |                         | 10 | 50 |      |    |    |            | 2  | 2689                 | 67         |
| 30 | 11                      | 25 | 22 | 191  | 25 | 22 | 2          | 3  | 4255218              | 81055      |
|    |                         | 10 | 50 |      |    |    |            | 2  | 2730                 | 68         |
| 40 | 11                      | 36 | 12 | 191  | 36 | 12 | 2          | 5  | 4252488              | 80987      |
|    |                         | 10 | 50 |      |    |    |            | 1  | 2772                 | 69         |
| 50 | 11                      | 47 | 2  | 191  | 47 | 2  | 2          | 6  | 4249716              | 80918      |
|    |                         | 10 | 50 |      |    |    |            | 2  | 2814                 | 70         |
| II | 11                      | 57 | 52 | 191  | 57 | 52 | 2          | 8  | 4246902              | 80848      |
|    |                         | 10 | 50 |      |    |    |            | 2  | 2855                 | 71         |
| 10 | 12                      | 8  | 42 | 192  | 8  | 42 | 2          | 10 | 4244047              | 80777      |
|    |                         | 10 | 50 |      |    |    |            | 1  | 2897                 | 72         |
| 20 | 12                      | 19 | 32 | 192  | 19 | 32 | 2          | 11 | 4241150              | 80705      |
|    |                         | 10 | 49 |      |    |    |            | 2  | 2938                 | 74         |
| 30 | 12                      | 30 | 21 | 192  | 30 | 21 | 2          | 13 | 4238212              | 80601      |
|    |                         | 10 | 49 |      |    |    |            | 2  | 2380                 | 75         |
| 40 | 12                      | 41 | 10 | 192  | 41 | 10 | 2          | 15 | 4235232              | 80556      |
|    |                         | 10 | 49 |      |    |    |            | 1  | 3011                 | 76         |
| 50 | 12                      | 51 | 59 | 192  | 51 | 59 | 2          | 16 | 4232211              | 80480      |
|    |                         | 10 | 49 |      |    |    |            | 2  | 3062                 | 77         |
| 12 | 13                      | 2  | 48 | 193  | 2  | 48 | 2          | 18 | 4229149              | 80403      |
|    |                         | 10 | 49 |      |    |    |            | 2  | 3103                 | 78         |



# CANON MEDIATIONVM

| V $\frac{1}{2}$         |    |     |    |     |    |            |   |                                 |         |            |  |
|-------------------------|----|-----|----|-----|----|------------|---|---------------------------------|---------|------------|--|
| Radix ascensio-<br>num. |    |     |    |     |    | Dra<br>Ad. |   | Numerus<br>multipli-<br>candus. |         | Dra<br>Ad. |  |
| par                     |    | par |    | par |    | par        |   | par                             |         | par        |  |
| 12                      | 13 | 2   | 48 | 193 | 2  | 48         | 2 | 18                              | 4229149 | 80403      |  |
| 10                      | 13 | 13  | 37 | 193 | 13 | 37         | 2 | 20                              | 4226046 | 80325      |  |
|                         |    | 10  | 49 |     |    |            |   | 1                               | 3144    | 79         |  |
| 20                      | 13 | 24  | 16 | 193 | 24 | 26         | 2 | 21                              | 4222902 | 80246      |  |
|                         |    | 10  | 48 |     |    |            |   | 2                               | 3185    | 80         |  |
| 30                      | 13 | 35  | 14 | 193 | 35 | 14         | 2 | 23                              | 4219717 | 80166      |  |
|                         |    | 10  | 48 |     |    |            |   | 2                               | 3226    | 80         |  |
| 40                      | 13 | 46  | 2  | 193 | 46 | 2          | 2 | 25                              | 4216491 | 80086      |  |
|                         |    | 10  | 48 |     |    |            |   | 2                               | 3267    | 81         |  |
| 50                      | 13 | 56  | 50 | 193 | 56 | 50         | 2 | 27                              | 4213224 | 80005      |  |
|                         |    | 10  | 48 |     |    |            |   | 2                               | 3308    | 82         |  |
| 13                      | 14 | 7   | 38 | 194 | 7  | 38         | 2 | 29                              | 4209916 | 79923      |  |
|                         |    | 10  | 48 |     |    |            |   | 1                               | 3349    | 83         |  |
| 10                      | 14 | 18  | 26 | 194 | 18 | 26         | 2 | 30                              | 4206567 | 79840      |  |
|                         |    | 10  | 48 |     |    |            |   | 2                               | 3389    | 84         |  |
| 20                      | 14 | 29  | 14 | 194 | 29 | 14         | 2 | 32                              | 4203178 | 79756      |  |
|                         |    | 10  | 48 |     |    |            |   | 2                               | 3430    | 85         |  |
| 30                      | 14 | 40  | 2  | 194 | 40 | 2          | 2 | 34                              | 4199748 | 79671      |  |
|                         |    | 10  | 47 |     |    |            |   | 2                               | 3470    | 86         |  |
| 40                      | 14 | 50  | 49 | 194 | 50 | 49         | 2 | 36                              | 4196278 | 79585      |  |
|                         |    | 10  | 47 |     |    |            |   | 2                               | 3511    | 87         |  |
| 50                      | 15 | 1   | 36 | 195 | 1  | 36         | 2 | 38                              | 4192767 | 79498      |  |
|                         |    | 10  | 47 |     |    |            |   | 2                               | 3551    | 88         |  |
| 14                      | 15 | 12  | 23 | 195 | 12 | 23         | 2 | 40                              | 4189216 | 79410      |  |
|                         |    | 10  | 47 |     |    |            |   | 1                               | 3591    | 89         |  |
| 10                      | 15 | 23  | 10 | 195 | 23 | 10         | 2 | 41                              | 4185625 | 79321      |  |
|                         |    | 10  | 47 |     |    |            |   | 2                               | 3632    | 90         |  |
| 20                      | 15 | 33  | 57 | 195 | 33 | 57         | 2 | 43                              | 4181993 | 79231      |  |
|                         |    | 10  | 46 |     |    |            |   | 2                               | 3672    | 91         |  |
| 30                      | 15 | 44  | 43 | 195 | 44 | 43         | 2 | 45                              | 4178321 | 79140      |  |
|                         |    | 10  | 46 |     |    |            |   | 2                               | 3712    | 92         |  |
| 40                      | 15 | 55  | 29 | 195 | 55 | 29         | 2 | 47                              | 4174609 | 79048      |  |
|                         |    | 10  | 46 |     |    |            |   | 1                               | 3752    | 93         |  |
| 50                      | 16 | 6   | 15 | 196 | 6  | 15         | 2 | 48                              | 4170857 | 78955      |  |
|                         |    | 10  | 46 |     |    |            |   | 2                               | 3792    | 94         |  |
| 15                      | 16 | 17  | 1  | 196 | 17 | 1          | 2 | 50                              | 4167065 | 78861      |  |
|                         |    | 10  | 46 |     |    |            |   | 2                               | 3832    | 95         |  |



V  $\frac{1}{2}$ 

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra.<br>Ad. |    | Numerus<br>multipli-<br>candus. | Dra.<br>Ad. |  |
|----|-------------------------|----|----|------|----|----|-------------|----|---------------------------------|-------------|--|
|    | Par                     | /  | // | Par. | /  | // | /           | // |                                 |             |  |
| 15 | 16                      | 17 | 1  | 196  | 17 | 1  | 2           | 50 | 4167065                         | 78861       |  |
| 10 | 16                      | 27 | 47 | 196  | 27 | 47 | 2           | 51 | 4163233                         | 78766       |  |
|    |                         | 10 | 46 |      |    |    |             | 2  | 2871                            | 96          |  |
| 20 | 16                      | 38 | 33 | 196  | 38 | 33 | 2           | 53 | 4159362                         | 78570       |  |
|    |                         | 10 | 46 |      |    |    |             | 1  | 3911                            | 97          |  |
| 30 | 16                      | 49 | 19 | 196  | 49 | 19 | 2           | 54 | 4155451                         | 78477       |  |
|    |                         | 10 | 45 |      |    |    |             | 2  | 3951                            | 98          |  |
| 40 | 17                      | 0  | 4  | 197  | 0  | 4  | 2           | 56 | 4151500                         | 78379       |  |
|    |                         | 10 | 45 |      |    |    |             | 2  | 3991                            | 99          |  |
| 50 | 17                      | 10 | 49 | 197  | 10 | 49 | 2           | 58 | 4147509                         | 78380       |  |
|    |                         | 10 | 45 |      |    |    |             | 1  | 4030                            | 100         |  |
| 16 | 17                      | 21 | 34 | 197  | 21 | 34 | 2           | 59 | 4143479                         | 78280       |  |
|    |                         | 10 | 45 |      |    |    |             | 2  | 4067                            | 100         |  |
| 10 | 17                      | 32 | 19 | 197  | 32 | 19 | 3           | 1  | 4139410                         | 78180       |  |
|    |                         | 10 | 44 |      |    |    |             | 1  | 4108                            | 101         |  |
| 20 | 17                      | 43 | 3  | 197  | 43 | 3  | 3           | 2  | 4135302                         | 78079       |  |
|    |                         | 10 | 44 |      |    |    |             | 2  | 4148                            | 102         |  |
| 30 | 17                      | 53 | 47 | 197  | 53 | 47 | 3           | 4  | 4131154                         | 77977       |  |
|    |                         | 10 | 44 |      |    |    |             | 2  | 4187                            | 102         |  |
| 40 | 18                      | 4  | 31 | 198  | 4  | 31 | 3           | 6  | 4126967                         | 77875       |  |
|    |                         | 10 | 44 |      |    |    |             | 1  | 4226                            | 103         |  |
| 50 | 18                      | 15 | 15 | 198  | 15 | 15 | 3           | 7  | 4122741                         | 77772       |  |
|    |                         | 10 | 44 |      |    |    |             | 2  | 4265                            | 104         |  |
| 17 | 18                      | 25 | 59 | 198  | 25 | 59 | 3           | 9  | 4118476                         | 77668       |  |
|    |                         | 10 | 43 |      |    |    |             | 1  | 4304                            | 105         |  |
| 10 | 18                      | 36 | 42 | 198  | 36 | 42 | 3           | 10 | 4114172                         | 77563       |  |
|    |                         | 10 | 43 |      |    |    |             | 2  | 4343                            | 106         |  |
| 20 | 18                      | 47 | 25 | 198  | 47 | 25 | 3           | 12 | 4109829                         | 77457       |  |
|    |                         | 10 | 43 |      |    |    |             | 2  | 4381                            | 107         |  |
| 30 | 18                      | 58 | 8  | 198  | 58 | 8  | 3           | 14 | 4105448                         | 77350       |  |
|    |                         | 10 | 43 |      |    |    |             | 1  | 4419                            | 108         |  |
| 40 | 19                      | 8  | 51 | 199  | 8  | 51 | 3           | 15 | 4101029                         | 77242       |  |
|    |                         | 10 | 43 |      |    |    |             | 2  | 4477                            | 109         |  |
| 50 | 19                      | 19 | 34 | 199  | 19 | 34 | 3           | 17 | 4096572                         | 77133       |  |
|    |                         | 10 | 43 |      |    |    |             | 1  | 4496                            | 110         |  |
| 18 | 19                      | 30 | 17 | 199  | 30 | 17 | 3           | 18 | 4092076                         | 77023       |  |
|    |                         | 10 | 42 |      |    |    |             | 2  | 4534                            | 111         |  |



# CANON MEDIATIONVM

V  $\frac{1}{2}$

| Radix ascensio-<br>num. |    |    |    |     |    |    | Dña<br>Ad. |    | Numerus<br>multiplic. | Dña<br>Ad. |
|-------------------------|----|----|----|-----|----|----|------------|----|-----------------------|------------|
| par. / // par. / //     |    |    |    |     |    |    | / //       |    |                       |            |
| 18                      | 19 | 30 | 17 | 199 | 30 | 17 | 3          | 18 | 4092076               | 77023      |
| 10                      | 19 | 40 | 59 | 199 | 40 | 59 | 3          | 20 | 4087542               | 76912      |
|                         |    | 10 | 42 |     |    |    |            | 1  | 4572                  | 111        |
| 20                      | 19 | 51 | 41 | 199 | 51 | 41 | 3          | 21 | 4082970               | 76801      |
|                         |    | 10 | 42 |     |    |    |            | 2  | 4611                  | 112        |
| 30                      | 20 | 2  | 23 | 200 | 2  | 23 | 3          | 23 | 4078359               | 76689      |
|                         |    | 10 | 42 |     |    |    |            | 1  | 4649                  | 113        |
| 40                      | 20 | 13 | 5  | 200 | 13 | 5  | 3          | 24 | 4073710               | 76576      |
|                         |    | 10 | 42 |     |    |    |            | 2  | 4687                  | 114        |
| 50                      | 20 | 23 | 47 | 200 | 23 | 47 | 3          | 26 | 4069023               | 76462      |
|                         |    | 10 | 42 |     |    |    |            | 1  | 4725                  | 115        |
| 19                      | 20 | 34 | 29 | 200 | 34 | 29 | 3          | 27 | 4064298               | 76347      |
|                         |    | 10 | 41 |     |    |    |            | 2  | 4763                  | 116        |
| 10                      | 20 | 45 | 10 | 200 | 45 | 10 | 3          | 29 | 4059535               | 76231      |
|                         |    | 10 | 41 |     |    |    |            | 1  | 4800                  | 116        |
| 20                      | 20 | 55 | 51 | 200 | 55 | 51 | 3          | 30 | 4054735               | 76115      |
|                         |    | 10 | 41 |     |    |    |            | 2  | 4837                  | 117        |
| 30                      | 21 | 6  | 32 | 201 | 6  | 32 | 3          | 32 | 4049898               | 75998      |
|                         |    | 10 | 41 |     |    |    |            | 1  | 4874                  | 118        |
| 40                      | 21 | 17 | 13 | 201 | 17 | 13 | 3          | 33 | 4045024               | 75880      |
|                         |    | 10 | 40 |     |    |    |            | 2  | 4912                  | 119        |
| 50                      | 21 | 27 | 53 | 201 | 27 | 53 | 3          | 35 | 4040112               | 75761      |
|                         |    | 10 | 40 |     |    |    |            | 1  | 4949                  | 120        |
| 20                      | 21 | 38 | 33 | 201 | 38 | 33 | 3          | 36 | 4035163               | 75641      |
|                         |    | 10 | 40 |     |    |    |            | 2  | 4986                  | 120        |
| 10                      | 21 | 49 | 13 | 201 | 49 | 13 | 3          | 38 | 4030177               | 75521      |
|                         |    | 10 | 40 |     |    |    |            | 1  | 5023                  | 121        |
| 20                      | 21 | 59 | 53 | 201 | 59 | 53 | 3          | 39 | 4025154               | 75400      |
|                         |    | 10 | 39 |     |    |    |            | 2  | 5060                  | 122        |
| 30                      | 22 | 10 | 32 | 202 | 10 | 32 | 3          | 41 | 4020094               | 75278      |
|                         |    | 10 | 39 |     |    |    |            | 1  | 5097                  | 123        |
| 40                      | 22 | 21 | 11 | 202 | 21 | 11 | 3          | 42 | 4014997               | 75155      |
|                         |    | 10 | 39 |     |    |    |            | 2  | 5134                  | 124        |
| 50                      | 22 | 31 | 50 | 202 | 31 | 50 | 3          | 44 | 4009863               | 75031      |
|                         |    | 10 | 39 |     |    |    |            | 1  | 5170                  | 125        |
| 21                      | 22 | 42 | 29 | 202 | 42 | 29 | 3          | 45 | 4004693               | 74906      |
|                         |    | 10 | 38 |     |    |    |            | 2  | 5207                  | 125        |



V  $\frac{1}{2}$ 

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra.<br>Ad. |    | Numerus<br>multipli-<br>candus. | Dra.<br>Ad. |  |
|----|-------------------------|----|----|------|----|----|-------------|----|---------------------------------|-------------|--|
|    | Par                     | /  | // | Par. | /  | // | /           | // |                                 |             |  |
| 21 | 22                      | 42 | 29 | 202  | 42 | 29 | 3           | 45 | 4004693                         | 74906       |  |
| 10 | 22                      | 53 | 7  | 202  | 53 | 7  | 3           | 47 | 3999486                         | 74781       |  |
|    |                         | 10 | 38 |      |    |    |             | 1  | 5242                            | 126         |  |
| 20 | 23                      | 3  | 45 | 203  | 3  | 45 | 3           | 48 | 3994242                         | 74655       |  |
|    |                         | 10 | 38 |      |    |    |             | 1  | 5280                            | 127         |  |
| 30 | 23                      | 14 | 23 | 203  | 14 | 23 | 3           | 49 | 3988962                         | 74528       |  |
|    |                         | 10 | 38 |      |    |    |             | 2  | 5316                            | 128         |  |
| 40 | 23                      | 25 | 1  | 203  | 25 | 1  | 3           | 51 | 3983646                         | 74400       |  |
|    |                         | 10 | 38 |      |    |    |             | 1  | 5352                            | 128         |  |
| 50 | 23                      | 35 | 39 | 203  | 35 | 39 | 3           | 52 | 3978294                         | 74272       |  |
|    |                         | 10 | 38 |      |    |    |             | 1  | 5388                            | 129         |  |
| 22 | 23                      | 46 | 17 | 203  | 46 | 17 | 3           | 53 | 3972906                         | 74143       |  |
|    |                         | 10 | 37 |      |    |    |             | 2  | 5424                            | 130         |  |
| 10 | 23                      | 56 | 54 | 203  | 56 | 54 | 3           | 55 | 3967482                         | 74013       |  |
|    |                         | 10 | 37 |      |    |    |             | 1  | 5460                            | 130         |  |
| 20 | 24                      | 7  | 31 | 204  | 7  | 31 | 3           | 56 | 3962022                         | 73883       |  |
|    |                         | 10 | 37 |      |    |    |             | 1  | 5496                            | 131         |  |
| 30 | 24                      | 18 | 8  | 204  | 18 | 8  | 3           | 57 | 3956526                         | 73752       |  |
|    |                         | 10 | 36 |      |    |    |             | 2  | 5531                            | 132         |  |
| 40 | 24                      | 28 | 44 | 204  | 28 | 44 | 3           | 59 | 3950995                         | 73620       |  |
|    |                         | 10 | 36 |      |    |    |             | 1  | 5567                            | 133         |  |
| 50 | 24                      | 39 | 20 | 204  | 39 | 20 | 4           | 0  | 3945428                         | 73487       |  |
|    |                         | 10 | 36 |      |    |    |             | 1  | 5602                            | 133         |  |
| 23 | 24                      | 49 | 56 | 204  | 49 | 56 | 4           | 1  | 3939826                         | 73354       |  |
|    |                         | 10 | 35 |      |    |    |             | 1  | 5637                            | 134         |  |
| 10 | 25                      | 0  | 31 | 205  | 0  | 31 | 4           | 2  | 3934189                         | 73220       |  |
|    |                         | 10 | 35 |      |    |    |             | 1  | 5672                            | 135         |  |
| 20 | 25                      | 11 | 6  | 205  | 11 | 16 | 4           | 3  | 3928517                         | 73085       |  |
|    |                         | 10 | 35 |      |    |    |             | 2  | 5708                            | 135         |  |
| 30 | 25                      | 21 | 41 | 205  | 21 | 41 | 4           | 5  | 3922809                         | 72950       |  |
|    |                         | 10 | 35 |      |    |    |             | 1  | 5743                            | 136         |  |
| 40 | 25                      | 32 | 16 | 205  | 32 | 16 | 4           | 6  | 3917066                         | 72814       |  |
|    |                         | 10 | 35 |      |    |    |             | 1  | 5778                            | 137         |  |
| 50 | 25                      | 42 | 51 | 205  | 42 | 51 | 4           | 7  | 3711288                         | 72677       |  |
|    |                         | 10 | 35 |      |    |    |             | 1  | 5813                            | 137         |  |
| 24 | 25                      | 53 | 26 | 205  | 53 | 26 | 4           | 8  | 3905475                         | 72540       |  |
|    |                         | 10 | 34 |      |    |    |             | 1  | 5848                            | 138         |  |



# CANON MEDIATIONVM

| V $\frac{1}{2}$         |    |    |      |     |    |            |    |                       |         |            |  |
|-------------------------|----|----|------|-----|----|------------|----|-----------------------|---------|------------|--|
| Radix ascensio-<br>num. |    |    |      |     |    | Dra<br>Ad. |    | Numerus<br>multiplic. |         | Dra<br>Ad. |  |
| par                     | /  | // | par. | /   | // | /          | // |                       |         |            |  |
| 24                      | 25 | 53 | 26   | 205 | 53 | 26         | 4  | 8                     | 3905475 | 72540      |  |
| 10                      | 26 | 4  | 0    | 206 | 4  | 0          | 4  | 9                     | 3899627 | 72402      |  |
|                         |    | 10 | 54   |     |    |            |    | 2                     | 5882    | 139        |  |
| 20                      | 26 | 14 | 34   | 206 | 14 | 34         | 4  | 11                    | 3893745 | 72263      |  |
|                         |    | 10 | 34   |     |    |            |    | 1                     | 5916    | 139        |  |
| 30                      | 26 | 25 | 8    | 206 | 25 | 8          | 4  | 12                    | 3887829 | 72124      |  |
|                         |    | 10 | 34   |     |    |            |    | 1                     | 5950    | 140        |  |
| 40                      | 26 | 35 | 42   | 206 | 35 | 42         | 4  | 13                    | 3881879 | 71984      |  |
|                         |    | 10 | 53   |     |    |            |    | 2                     | 5984    | 141        |  |
| 50                      | 26 | 46 | 15   | 206 | 46 | 15         | 4  | 15                    | 3875895 | 71843      |  |
|                         |    | 10 | 33   |     |    |            |    | 1                     | 6018    | 141        |  |
| 25                      | 26 | 56 | 48   | 206 | 56 | 48         | 4  | 16                    | 3869877 | 71702      |  |
|                         |    | 10 | 33   |     |    |            |    | 1                     | 6052    | 142        |  |
| 10                      | 27 | 7  | 21   | 207 | 7  | 21         | 4  | 17                    | 3863825 | 71560      |  |
|                         |    | 10 | 32   |     |    |            |    | 1                     | 6086    | 143        |  |
| 20                      | 27 | 17 | 53   | 207 | 17 | 53         | 4  | 18                    | 3857739 | 71417      |  |
|                         |    | 10 | 32   |     |    |            |    | 2                     | 6120    | 143        |  |
| 30                      | 27 | 28 | 25   | 207 | 28 | 25         | 4  | 20                    | 3851619 | 71274      |  |
|                         |    | 10 | 32   |     |    |            |    | 1                     | 6154    | 144        |  |
| 40                      | 27 | 38 | 57   | 207 | 38 | 57         | 4  | 21                    | 3845465 | 71130      |  |
|                         |    | 10 | 32   |     |    |            |    | 1                     | 6187    | 144        |  |
| 50                      | 27 | 49 | 29   | 207 | 49 | 29         | 4  | 22                    | 3839278 | 70986      |  |
|                         |    | 10 | 31   |     |    |            |    | 1                     | 6220    | 145        |  |
| 26                      | 28 | 0  | 0    | 208 | 0  | 0          | 4  | 23                    | 3833058 | 70841      |  |
|                         |    | 10 | 31   |     |    |            |    | 1                     | 6254    | 146        |  |
| 10                      | 28 | 10 | 31   | 208 | 10 | 31         | 4  | 24                    | 3826804 | 70695      |  |
|                         |    | 10 | 31   |     |    |            |    | 1                     | 6287    | 146        |  |
| 20                      | 28 | 21 | 2    | 208 | 21 | 2          | 4  | 25                    | 3820517 | 70549      |  |
|                         |    | 10 | 31   |     |    |            |    | 1                     | 6320    | 147        |  |
| 30                      | 28 | 31 | 33   | 208 | 31 | 33         | 4  | 26                    | 3814197 | 70402      |  |
|                         |    | 10 | 30   |     |    |            |    | 1                     | 6353    | 147        |  |
| 40                      | 28 | 42 | 3    | 208 | 42 | 3          | 4  | 27                    | 3807844 | 70254      |  |
|                         |    | 10 | 30   |     |    |            |    | 1                     | 6385    | 148        |  |
| 50                      | 28 | 52 | 33   | 208 | 52 | 33         | 4  | 28                    | 3801459 | 70106      |  |
|                         |    | 10 | 29   |     |    |            |    | 1                     | 6418    | 149        |  |
| 27                      | 29 | 3  | 2    | 209 | 3  | 2          | 4  | 29                    | 3795041 | 69957      |  |
|                         |    | 10 | 29   |     |    |            |    |                       | 6451    | 149        |  |



V  $\frac{1}{2}$ 

| V                       |    |    |    |    |     |      |     |    |    |         |         |         | L I G E N E R A L I S. |    |                      |         |            |  |  |  |  |  |  |  |  | 57 |  |
|-------------------------|----|----|----|----|-----|------|-----|----|----|---------|---------|---------|------------------------|----|----------------------|---------|------------|--|--|--|--|--|--|--|--|----|--|
| Radix ascensio-<br>num. |    |    |    |    |     |      |     |    |    |         |         |         | Dra<br>Ad.             |    | Numerus<br>multipli- |         | Dra<br>Ad. |  |  |  |  |  |  |  |  |    |  |
| par                     |    | /  |    | // |     | par. |     | /  |    | //      |         | /       |                        | // |                      | candus. |            |  |  |  |  |  |  |  |  |    |  |
| 27                      |    | 29 | 3  | 2  | 209 | 3    | 2   | 4  | 29 | 3795041 | 69957   |         |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 10                      | 29 | 13 | 31 | 10 | 29  | 209  | 13  | 31 | 4  | 30      | 3788590 | 69808   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 6483    | 150     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 20                      | 29 | 24 | 0  | 10 | 29  | 209  | 24  | 0  | 4  | 31      | 3782107 | 69658   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 6516    | 151     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 30                      | 29 | 34 | 29 | 10 | 29  | 209  | 34  | 29 | 4  | 32      | 3775591 | 69507   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 0       | 6549    | 151     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 40                      | 29 | 44 | 58 | 10 | 29  | 209  | 44  | 58 | 4  | 32      | 3769042 | 69356   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 6581    | 152     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 50                      | 29 | 55 | 27 | 10 | 28  | 209  | 55  | 27 | 4  | 33      | 3762461 | 69204   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 6613    | 153     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 28                      |    | 30 | 5  | 55 | 10  | 28   | 210 | 5  | 55 | 4       | 34      | 3755848 | 69051                  |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 6645    | 153     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 10                      | 30 | 16 | 23 | 10 | 28  | 210  | 16  | 23 | 4  | 35      | 3749203 | 68898   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 6677    | 154     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 20                      | 30 | 26 | 51 | 10 | 27  | 210  | 26  | 51 | 4  | 36      | 3742526 | 98744   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 0       | 6708    | 154     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 30                      | 30 | 37 | 18 | 10 | 27  | 210  | 37  | 18 | 4  | 36      | 3735818 | 68590   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 6739    | 155     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 40                      | 30 | 47 | 45 | 10 | 27  | 210  | 47  | 45 | 4  | 37      | 3729079 | 68435   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 6771    | 155     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 50                      | 30 | 58 | 12 | 10 | 27  | 210  | 58  | 12 | 4  | 38      | 3722308 | 68280   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 6802    | 156     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 29                      |    | 31 | 8  | 39 | 10  | 26   | 211 | 8  | 39 | 4       | 39      | 3715506 | 68124                  |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 6833    | 156     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 10                      | 31 | 19 | 5  | 10 | 26  | 211  | 19  | 5  | 4  | 40      | 3708673 | 67968   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 6865    | 157     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 20                      | 31 | 29 | 31 | 10 | 26  | 211  | 29  | 31 | 4  | 41      | 3701808 | 67811   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 0       | 6896    | 158     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 30                      | 31 | 39 | 57 | 10 | 25  | 211  | 39  | 57 | 4  | 41      | 3694912 | 67653   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 6927    | 158     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 40                      | 31 | 50 | 22 | 10 | 25  | 211  | 50  | 22 | 4  | 42      | 3687985 | 67495   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 6957    | 158     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 50                      | 32 | 0  | 47 | 10 | 25  | 212  | 0   | 47 | 4  | 43      | 3681028 | 67337   |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 6988    | 159     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
| 30                      |    | 32 | 11 | 12 | 10  | 25   | 212 | 11 | 12 | 4       | 44      | 3674040 | 67178                  |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |
|                         |    |    |    |    |     |      |     |    |    | 1       | 7018    | 160     |                        |    |                      |         |            |  |  |  |  |  |  |  |  |    |  |



# CANON MEDIATIONVM

| 8 m                     |    |                |      |    |    |            |         |                                 |  |              |  |
|-------------------------|----|----------------|------|----|----|------------|---------|---------------------------------|--|--------------|--|
| Radix ascensio-<br>num. |    |                |      |    |    | Dra<br>Ad. |         | Numerus<br>multipli-<br>candus. |  | Dra<br>Ad.   |  |
| par.                    | /  | //             | par. | /  | // | /          | //      |                                 |  |              |  |
| O                       | 32 | 11 12          | 212  | 11 | 12 | 4          | 44      | 3674040                         |  | 67178        |  |
| 10                      | 32 | 21 37<br>10 24 | 212  | 21 | 37 | 4          | 45<br>1 | 3667022<br>7049                 |  | 67018<br>160 |  |
| 20                      | 32 | 32 1<br>10 24  | 212  | 32 | 1  | 4          | 46<br>1 | 3659973<br>7079                 |  | 66858<br>161 |  |
| 30                      | 32 | 42 25<br>10 24 | 212  | 42 | 25 | 4          | 47<br>1 | 3652894<br>7109                 |  | 66697<br>161 |  |
| 40                      | 32 | 52 49<br>10 23 | 212  | 52 | 49 | 4          | 48<br>0 | 3645785<br>7139                 |  | 66536<br>162 |  |
| 50                      | 33 | 3 12<br>10 23  | 213  | 3  | 12 | 4          | 48<br>1 | 3638646<br>7169                 |  | 66374<br>162 |  |
| I                       | 33 | 13 35<br>10 23 | 213  | 13 | 35 | 4          | 49<br>1 | 3631477<br>7199                 |  | 66212<br>163 |  |
| 10                      | 33 | 23 58<br>10 22 | 213  | 23 | 58 | 4          | 50<br>1 | 3624278<br>7229                 |  | 66049<br>163 |  |
| 20                      | 33 | 34 20<br>10 22 | 213  | 34 | 20 | 4          | 51<br>1 | 3617049<br>7258                 |  | 65886<br>164 |  |
| 30                      | 33 | 44 42<br>10 22 | 213  | 44 | 42 | 4          | 52<br>0 | 3609791<br>7288                 |  | 65722<br>164 |  |
| 40                      | 33 | 55 4<br>10 22  | 213  | 55 | 4  | 4          | 52<br>1 | 3602503<br>7317                 |  | 65558<br>165 |  |
| 50                      | 34 | 5 26<br>10 21  | 214  | 5  | 26 | 4          | 53<br>1 | 3595186<br>7347                 |  | 65393<br>165 |  |
| 2                       | 34 | 15 47<br>10 21 | 214  | 15 | 47 | 4          | 54<br>1 | 3587839<br>7376                 |  | 65228<br>165 |  |
| 10                      | 34 | 26 8<br>10 21  | 214  | 26 | 8  | 4          | 55<br>0 | 3580463<br>7405                 |  | 65063<br>166 |  |
| 20                      | 34 | 36 29<br>10 20 | 214  | 36 | 29 | 4          | 55<br>1 | 3573058<br>7434                 |  | 64897<br>166 |  |
| 30                      | 34 | 46 49<br>10 20 | 214  | 46 | 49 | 4          | 56<br>1 | 3565624<br>7462                 |  | 64731<br>167 |  |
| 40                      | 34 | 57 9<br>10 20  | 214  | 57 | 9  | 4          | 57<br>1 | 3558162<br>7491                 |  | 64564<br>167 |  |
| 50                      | 35 | 7 29<br>10 20  | 215  | 7  | 29 | 4          | 58<br>0 | 3550671<br>7519                 |  | 64397<br>168 |  |
| 3                       | 35 | 17 49<br>10 19 | 215  | 17 | 49 | 4          | 58<br>1 | 3543152<br>7547                 |  | 64229<br>168 |  |



♄ m

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli- | Dra<br>Ad.   |
|----|-------------------------|----|----|------|----|----|------------|----|----------------------|--------------|
|    | par                     | /  | // | par. | /  | // | /          | // |                      |              |
| 3  | 35                      | 17 | 49 | 215  | 17 | 49 | 4          | 58 | 3543152              | 64229        |
| 10 | 35                      | 28 | 8  | 215  | 28 | 8  | 4          | 59 | 3535605<br>7576      | 64061<br>168 |
| 20 | 35                      | 38 | 27 | 215  | 38 | 27 | 4          | 59 | 3528029<br>7604      | 63893<br>169 |
| 30 | 35                      | 48 | 46 | 215  | 48 | 46 | 5          | 0  | 3520425<br>7632      | 63724<br>169 |
| 40 | 35                      | 59 | 5  | 215  | 59 | 5  | 5          | 0  | 3512793<br>7660      | 63555<br>170 |
| 50 | 36                      | 9  | 23 | 216  | 9  | 23 | 5          | 1  | 3505133<br>7688      | 63385<br>170 |
| 4  | 36                      | 19 | 41 | 216  | 19 | 41 | 5          | 1  | 3497445<br>7716      | 63215<br>170 |
| 10 | 36                      | 29 | 58 | 216  | 29 | 58 | 5          | 2  | 3489729<br>7743      | 63045<br>171 |
| 20 | 36                      | 40 | 15 | 216  | 40 | 15 | 5          | 3  | 3481986<br>7770      | 62874<br>171 |
| 30 | 36                      | 50 | 32 | 216  | 50 | 32 | 5          | 3  | 3474216<br>7798      | 62703<br>172 |
| 40 | 37                      | 0  | 49 | 217  | 0  | 49 | 5          | 4  | 3466418<br>7825      | 62531<br>172 |
| 50 | 37                      | 11 | 5  | 217  | 11 | 5  | 5          | 4  | 3458593<br>7852      | 62359<br>173 |
| 5  | 37                      | 21 | 21 | 217  | 21 | 21 | 5          | 5  | 3450741<br>7879      | 62186<br>173 |
| 10 | 37                      | 21 | 37 | 217  | 21 | 37 | 5          | 5  | 3442862<br>7906      | 62013<br>173 |
| 20 | 37                      | 41 | 53 | 217  | 41 | 53 | 5          | 5  | 3434956<br>7932      | 61840<br>174 |
| 30 | 37                      | 52 | 8  | 217  | 52 | 8  | 5          | 5  | 3427024<br>7959      | 61666<br>174 |
| 40 | 38                      | 2  | 23 | 218  | 2  | 23 | 5          | 6  | 3419065<br>7986      | 61492<br>174 |
| 50 | 38                      | 12 | 38 | 218  | 12 | 38 | 5          | 6  | 3411079<br>8012      | 61318<br>175 |
| 6  | 38                      | 22 | 52 | 218  | 22 | 52 | 5          | 7  | 3403067<br>8038      | 61143<br>175 |



# CANON MEDIATIONVM

| <div> <div> <div>8</div> <div>m</div> </div> <div>Radix ascensio-<br/>num.</div> </div> <div> <div>Dra<br/>Ad.</div> <div>Numerus<br/>multiplic.</div> <div>Dra<br/>Ad.</div> </div> |    |    |      |     |    |    |    |    |         |       |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|------|-----|----|----|----|----|---------|-------|--|
| par.                                                                                                                                                                                 | /  | // | par. | /   | // | /  | // |    |         |       |  |
| 6                                                                                                                                                                                    | 38 | 22 | 52   | 218 | 22 | 52 | 5  | 7  | 3403067 | 61143 |  |
| 10                                                                                                                                                                                   | 38 | 33 | 6    | 218 | 33 | 6  | 5  | 8  | 3395029 | 60968 |  |
|                                                                                                                                                                                      |    | 10 | 14   |     |    |    |    | 0  | 8064    | 175   |  |
| 20                                                                                                                                                                                   | 38 | 43 | 20   | 218 | 43 | 20 | 5  | 8  | 3386965 | 60793 |  |
|                                                                                                                                                                                      |    | 10 | 13   |     |    |    |    | 1  | 8090    | 176   |  |
| 30                                                                                                                                                                                   | 38 | 53 | 33   | 218 | 53 | 33 | 5  | 9  | 3378875 | 60617 |  |
|                                                                                                                                                                                      |    | 10 | 13   |     |    |    |    | 0  | 8116    | 176   |  |
| 40                                                                                                                                                                                   | 39 | 3  | 46   | 219 | 3  | 46 | 5  | 9  | 3370759 | 60441 |  |
|                                                                                                                                                                                      |    | 10 | 13   |     |    |    |    | 1  | 8148    | 177   |  |
| 50                                                                                                                                                                                   | 39 | 13 | 59   | 219 | 13 | 59 | 5  | 10 | 3362617 | 60264 |  |
|                                                                                                                                                                                      |    | 10 | 12   |     |    |    |    | 0  | 8168    | 177   |  |
| 7                                                                                                                                                                                    | 39 | 24 | 11   | 219 | 24 | 11 | 5  | 10 | 3354449 | 60087 |  |
|                                                                                                                                                                                      |    | 10 | 12   |     |    |    |    | 0  | 8193    | 177   |  |
| 10                                                                                                                                                                                   | 39 | 34 | 23   | 219 | 34 | 23 | 5  | 10 | 3346256 | 59910 |  |
|                                                                                                                                                                                      |    | 10 | 12   |     |    |    |    | 1  | 8219    | 178   |  |
| 20                                                                                                                                                                                   | 39 | 44 | 35   | 219 | 44 | 35 | 5  | 11 | 3338037 | 59732 |  |
|                                                                                                                                                                                      |    | 10 | 11   |     |    |    |    | 0  | 8244    | 178   |  |
| 30                                                                                                                                                                                   | 39 | 54 | 46   | 219 | 54 | 46 | 5  | 11 | 3329793 | 59554 |  |
|                                                                                                                                                                                      |    | 10 | 11   |     |    |    |    | 0  | 8269    | 178   |  |
| 40                                                                                                                                                                                   | 40 | 4  | 57   | 220 | 4  | 57 | 5  | 11 | 3321524 | 59376 |  |
|                                                                                                                                                                                      |    | 10 | 11   |     |    |    |    | 1  | 8294    | 178   |  |
| 50                                                                                                                                                                                   | 40 | 15 | 8    | 220 | 15 | 8  | 5  | 12 | 3313230 | 59198 |  |
|                                                                                                                                                                                      |    | 10 | 11   |     |    |    |    | 0  | 8318    | 179   |  |
| 8                                                                                                                                                                                    | 40 | 25 | 19   | 220 | 25 | 19 | 5  | 12 | 3304912 | 59019 |  |
|                                                                                                                                                                                      |    | 10 | 10   |     |    |    |    | 0  | 8343    | 179   |  |
| 10                                                                                                                                                                                   | 40 | 35 | 29   | 220 | 35 | 29 | 5  | 12 | 3296569 | 58840 |  |
|                                                                                                                                                                                      |    | 10 | 10   |     |    |    |    | 0  | 8368    | 179   |  |
| 20                                                                                                                                                                                   | 40 | 45 | 39   | 220 | 45 | 39 | 5  | 12 | 3288201 | 58661 |  |
|                                                                                                                                                                                      |    | 10 | 10   |     |    |    |    | 1  | 8393    | 180   |  |
| 30                                                                                                                                                                                   | 40 | 55 | 49   | 220 | 55 | 49 | 5  | 13 | 3279808 | 58481 |  |
|                                                                                                                                                                                      |    | 10 | 10   |     |    |    |    | 0  | 8417    | 180   |  |
| 40                                                                                                                                                                                   | 41 | 5  | 59   | 221 | 5  | 59 | 5  | 13 | 3271391 | 58301 |  |
|                                                                                                                                                                                      |    | 10 | 9    |     |    |    |    | 0  | 8442    | 180   |  |
| 50                                                                                                                                                                                   | 41 | 16 | 8    | 221 | 16 | 8  | 5  | 13 | 3262949 | 58121 |  |
|                                                                                                                                                                                      |    | 10 | 9    |     |    |    |    | 0  | 8466    | 181   |  |
| 9                                                                                                                                                                                    | 41 | 26 | 17   | 221 | 26 | 17 | 5  | 13 | 3254483 | 57940 |  |
|                                                                                                                                                                                      |    | 10 | 9    |     |    |    |    | 0  | 8490    | 181   |  |



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|    | Radix ascensio-<br>num. |          |         |      |    |    | Dra.<br>Ad. |         | Numerus<br>multipli-<br>candus. | Dra.<br>Ad.  |  |
|----|-------------------------|----------|---------|------|----|----|-------------|---------|---------------------------------|--------------|--|
|    | Par                     | /        | //      | Par. | /  | // | /           | //      |                                 |              |  |
| 9  | 41                      | 26       | 17      | 221  | 26 | 17 | 5           | 13      | 3254483                         | 57940        |  |
| 10 | 41                      | 36<br>10 | 26<br>8 | 221  | 36 | 26 | 5           | 13<br>0 | 3245993<br>8514                 | 57759<br>181 |  |
| 20 | 41                      | 46<br>10 | 34<br>8 | 221  | 46 | 34 | 5           | 13<br>0 | 3237479<br>8538                 | 57578<br>181 |  |
| 30 | 41                      | 56<br>10 | 42<br>7 | 221  | 56 | 42 | 5           | 13<br>1 | 3228941<br>8562                 | 57397<br>182 |  |
| 40 | 42                      | 6<br>10  | 50<br>7 | 222  | 6  | 50 | 5           | 14<br>0 | 3220379<br>8586                 | 57215<br>182 |  |
| 50 | 42                      | 16<br>10 | 57<br>7 | 222  | 16 | 57 | 5           | 14<br>0 | 3211793<br>8609                 | 57033<br>182 |  |
| 10 | 42                      | 27<br>10 | 4<br>7  | 222  | 27 | 4  | 5           | 14<br>0 | 3203184<br>8632                 | 56851<br>182 |  |
| 10 | 42                      | 37<br>10 | 11<br>6 | 222  | 37 | 11 | 5           | 14<br>0 | 3194552<br>8656                 | 56669<br>183 |  |
| 20 | 42                      | 47<br>10 | 17<br>6 | 222  | 47 | 17 | 5           | 14<br>0 | 3185896<br>8679                 | 56486<br>183 |  |
| 30 | 42                      | 57<br>10 | 23<br>6 | 222  | 57 | 23 | 5           | 14<br>1 | 3177217<br>8702                 | 56303<br>183 |  |
| 40 | 43                      | 7<br>10  | 29<br>5 | 223  | 7  | 29 | 5           | 15<br>0 | 3168515<br>8720                 | 56120<br>183 |  |
| 50 | 43                      | 17<br>10 | 34<br>5 | 223  | 17 | 34 | 5           | 15<br>0 | 3159790<br>8748                 | 55937<br>184 |  |
| 11 | 43                      | 27<br>10 | 39<br>5 | 223  | 27 | 39 | 5           | 15<br>0 | 3151042<br>8771                 | 55753<br>185 |  |
| 10 | 43                      | 37<br>10 | 44<br>5 | 223  | 37 | 44 | 5           | 15<br>0 | 3142271<br>8793                 | 55568<br>184 |  |
| 20 | 43                      | 47<br>10 | 49<br>4 | 223  | 47 | 49 | 5           | 15<br>0 | 3133478<br>8815                 | 55384<br>184 |  |
| 30 | 43                      | 57<br>10 | 53<br>4 | 223  | 57 | 53 | 5           | 15<br>0 | 3124663<br>8838                 | 55200<br>184 |  |
| 40 | 44                      | 7<br>10  | 57<br>4 | 224  | 7  | 57 | 5           | 15<br>0 | 3115825<br>8860                 | 55016<br>184 |  |
| 50 | 44                      | 18<br>10 | 1<br>3  | 224  | 18 | 1  | 5           | 15<br>0 | 3106965<br>8882                 | 54832<br>185 |  |
| 12 | 44                      | 28<br>10 | 4<br>3  | 224  | 28 | 4  | 5           | 15<br>0 | 3098083<br>8904                 | 54647<br>185 |  |



# CANON MEDIATIONVM

| 8 m                                 |    |    |    |      |    |            |    |                       |         |            |  |
|-------------------------------------|----|----|----|------|----|------------|----|-----------------------|---------|------------|--|
| Radix ascensio <sup>n</sup><br>num. |    |    |    |      |    | Dra<br>Ad. |    | Numerus<br>multiplic. |         | Dra<br>Ad. |  |
| par.                                |    | /  | // | par. |    | /          | // |                       |         |            |  |
| 12                                  | 44 | 28 | 4  | 224  | 28 | 4          | 5  | 15                    | 3098083 | 54647      |  |
|                                     | 44 | 38 | 7  | 224  | 38 | 7          | 5  | 15                    | 3089179 | 54462      |  |
|                                     | 10 | 10 | 3  |      |    |            |    | 1                     | 8926    | 185        |  |
| 20                                  | 44 | 48 | 10 | 224  | 48 | 10         | 5  | 16                    | 3080253 | 54277      |  |
|                                     | 10 | 10 | 2  |      |    |            |    | 0                     | 8948    | 185        |  |
|                                     | 44 | 58 | 12 | 224  | 58 | 12         | 5  | 16                    | 3071305 | 54092      |  |
| 30                                  | 10 | 10 | 2  |      |    |            |    | 0                     | 8970    | 186        |  |
|                                     | 45 | 8  | 14 | 225  | 8  | 14         | 5  | 16                    | 3062335 | 53906      |  |
|                                     | 10 | 10 | 2  |      |    |            |    | 0                     | 8991    | 186        |  |
| 40                                  | 45 | 18 | 16 | 225  | 18 | 16         | 5  | 16                    | 3053344 | 53720      |  |
|                                     | 10 | 10 | 1  |      |    |            |    | 0                     | 9013    | 186        |  |
|                                     | 45 | 28 | 17 | 225  | 28 | 17         | 5  | 16                    | 3044331 | 53534      |  |
| 13                                  | 10 | 10 | 1  |      |    |            |    | 0                     | 9034    | 186        |  |
|                                     | 45 | 38 | 18 | 225  | 38 | 18         | 5  | 16                    | 3035297 | 53348      |  |
|                                     | 10 | 10 | 1  |      |    |            |    | 0                     | 9055    | 187        |  |
| 20                                  | 45 | 48 | 19 | 225  | 48 | 19         | 5  | 16                    | 3026242 | 53161      |  |
|                                     | 10 | 10 | 1  |      |    |            |    | 0                     | 9076    | 187        |  |
|                                     | 45 | 58 | 20 | 225  | 58 | 20         | 5  | 16                    | 3017166 | 52974      |  |
| 30                                  | 10 | 10 | 0  |      |    |            |    | 0                     | 9097    | 187        |  |
|                                     | 46 | 8  | 20 | 226  | 8  | 20         | 5  | 16                    | 3008069 | 52787      |  |
|                                     | 10 | 10 | 0  |      |    |            |    | 1                     | 9118    | 187        |  |
| 40                                  | 46 | 18 | 20 | 226  | 18 | 20         | 5  | 15                    | 2998951 | 52600      |  |
|                                     | 10 | 10 | 0  |      |    |            |    | 0                     | 9139    | 187        |  |
|                                     | 46 | 28 | 20 | 226  | 28 | 20         | 5  | 15                    | 2989812 | 52413      |  |
| 14                                  | 10 | 10 | 0  |      |    |            |    | 0                     | 9159    | 188        |  |
|                                     | 46 | 38 | 19 | 226  | 38 | 19         | 5  | 15                    | 2980653 | 52225      |  |
|                                     | 9  | 9  | 59 |      |    |            |    | 0                     | 9190    | 188        |  |
| 20                                  | 46 | 48 | 18 | 226  | 48 | 18         | 5  | 15                    | 2971473 | 52037      |  |
|                                     | 9  | 9  | 59 |      |    |            |    | 0                     | 9201    | 188        |  |
|                                     | 46 | 58 | 17 | 226  | 58 | 17         | 5  | 15                    | 2962272 | 51849      |  |
| 30                                  | 9  | 9  | 59 |      |    |            |    | 0                     | 9221    | 188        |  |
|                                     | 47 | 8  | 16 | 227  | 8  | 16         | 5  | 15                    | 2953051 | 51661      |  |
|                                     | 9  | 9  | 58 |      |    |            |    | 0                     | 9241    | 188        |  |
| 40                                  | 47 | 18 | 14 | 227  | 18 | 14         | 5  | 15                    | 2943810 | 51473      |  |
|                                     | 9  | 9  | 58 |      |    |            |    | 0                     | 9261    | 188        |  |
|                                     | 47 | 28 | 12 | 227  | 28 | 12         | 5  | 15                    | 2934549 | 51285      |  |
| 15                                  | 9  | 9  | 57 |      |    |            |    | 0                     | 9282    | 189        |  |



♄ ♀

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra.<br>A d. |    | Numerus<br>multipli-<br>candus. | Dra.<br>Ad. |
|----|-------------------------|----|----|------|----|----|--------------|----|---------------------------------|-------------|
|    | Par                     | /  | // | Par. | /  | // | /            | // |                                 |             |
| 15 | 47                      | 28 | 12 | 227  | 28 | 12 | 5            | 15 | 2934549                         | 51285       |
| 10 | 47                      | 38 | 9  | 227  | 38 | 9  | 5            | 15 | 2925267                         | 51096       |
|    |                         | 9  | 57 |      |    |    |              | 1  | 9301                            | 189         |
| 20 | 47                      | 48 | 6  | 227  | 48 | 6  | 5            | 14 | 2915966                         | 50907       |
|    |                         | 9  | 57 |      |    |    |              | 0  | 9321                            | 189         |
| 30 | 47                      | 58 | 3  | 227  | 58 | 3  | 5            | 14 | 2906645                         | 50718       |
|    |                         | 9  | 57 |      |    |    |              | 0  | 9341                            | 189         |
| 40 | 48                      | 8  | 0  | 228  | 8  | 0  | 5            | 14 | 2897304                         | 50529       |
|    |                         | 9  | 57 |      |    |    |              | 0  | 9361                            | 189         |
| 50 | 48                      | 17 | 57 | 228  | 17 | 57 | 5            | 14 | 2887943                         | 50340       |
|    |                         | 9  | 56 |      |    |    |              | 1  | 9380                            | 189         |
| 16 | 48                      | 27 | 53 | 228  | 27 | 53 | 5            | 13 | 2878563                         | 50151       |
|    |                         | 9  | 56 |      |    |    |              | 0  | 9399                            | 189         |
| 10 | 48                      | 37 | 49 | 228  | 37 | 49 | 5            | 13 | 2869164                         | 49962       |
|    |                         | 9  | 56 |      |    |    |              | 0  | 9418                            | 189         |
| 20 | 48                      | 47 | 45 | 228  | 47 | 45 | 5            | 13 | 2859746                         | 49773       |
|    |                         | 9  | 55 |      |    |    |              | 0  | 9437                            | 189         |
| 30 | 48                      | 57 | 40 | 228  | 57 | 40 | 5            | 13 | 2850309                         | 49584       |
|    |                         | 9  | 55 |      |    |    |              | 1  | 9456                            | 190         |
| 40 | 49                      | 7  | 35 | 229  | 7  | 35 | 5            | 12 | 2840853                         | 49394       |
|    |                         | 9  | 55 |      |    |    |              | 0  | 9475                            | 190         |
| 50 | 49                      | 17 | 30 | 229  | 17 | 30 | 5            | 12 | 2831378                         | 49204       |
|    |                         | 9  | 54 |      |    |    |              | 0  | 9494                            | 190         |
| 17 | 49                      | 27 | 24 | 229  | 27 | 24 | 5            | 12 | 2821884                         | 49014       |
|    |                         | 9  | 54 |      |    |    |              | 0  | 9513                            | 190         |
| 10 | 49                      | 37 | 18 | 229  | 37 | 18 | 5            | 12 | 2812371                         | 48824       |
|    |                         | 9  | 54 |      |    |    |              | 1  | 9531                            | 190         |
| 20 | 49                      | 47 | 12 | 229  | 47 | 12 | 5            | 11 | 2802840                         | 48634       |
|    |                         | 9  | 53 |      |    |    |              | 0  | 9550                            | 190         |
| 30 | 49                      | 57 | 5  | 229  | 57 | 5  | 5            | 11 | 2793290                         | 48444       |
|    |                         | 9  | 53 |      |    |    |              | 0  | 9569                            | 190         |
| 40 | 50                      | 6  | 58 | 230  | 6  | 58 | 5            | 11 | 2783721                         | 48254       |
|    |                         | 9  | 53 |      |    |    |              | 1  | 9587                            | 191         |
| 50 | 50                      | 16 | 51 | 230  | 16 | 51 | 5            | 10 | 2774134                         | 48063       |
|    |                         | 9  | 53 |      |    |    |              | 0  | 9605                            | 191         |
| 18 | 50                      | 26 | 44 | 230  | 26 | 44 | 5            | 10 | 2764529                         | 47872       |
|    |                         | 9  | 52 |      |    |    |              | 0  | 9623                            | 191         |



# CANON MEDIATIONVM

8 m

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |         | Numerus<br>multipli-<br>candus. | Dra<br>Ad.   |
|----|-------------------------|----|----|------|----|----|------------|---------|---------------------------------|--------------|
|    | par.                    | /  | // | par. | /  | // | /          | //      |                                 |              |
| 18 | 50                      | 26 | 44 | 230  | 26 | 44 | 5          | 10      | 2764529                         | 47872        |
| 10 | 50                      | 36 | 36 | 230  | 36 | 36 | 5          | 10<br>1 | 2754906<br>9641                 | 47681<br>191 |
| 20 | 50                      | 46 | 28 | 230  | 46 | 28 | 5          | 9<br>0  | 2745265<br>9659                 | 47490<br>191 |
| 30 | 50                      | 56 | 20 | 230  | 56 | 20 | 5          | 9<br>0  | 2735606<br>9676                 | 47299<br>191 |
| 40 | 51                      | 6  | 11 | 231  | 6  | 11 | 5          | 9<br>1  | 2725930<br>9694                 | 47108<br>191 |
| 50 | 51                      | 16 | 2  | 231  | 16 | 2  | 5          | 8<br>0  | 2716236<br>9711                 | 46917<br>191 |
| 19 | 51                      | 25 | 53 | 231  | 25 | 53 | 5          | 8<br>0  | 2706525<br>9729                 | 46726<br>191 |
| 10 | 51                      | 35 | 44 | 231  | 35 | 44 | 5          | 8<br>1  | 2696796<br>9746                 | 46535<br>191 |
| 20 | 51                      | 45 | 34 | 231  | 45 | 34 | 5          | 7<br>0  | 2687050<br>9764                 | 46344<br>191 |
| 30 | 51                      | 55 | 24 | 231  | 55 | 24 | 5          | 7<br>1  | 2677286<br>9781                 | 46153<br>192 |
| 40 | 52                      | 5  | 14 | 232  | 5  | 14 | 5          | 6<br>0  | 2667505<br>9798                 | 45961<br>192 |
| 50 | 52                      | 15 | 3  | 232  | 15 | 3  | 5          | 6<br>1  | 2657707<br>9814                 | 45769<br>192 |
| 20 | 52                      | 24 | 52 | 232  | 24 | 52 | 5          | 5<br>0  | 2647893<br>9831                 | 45577<br>192 |
| 10 | 52                      | 34 | 51 | 232  | 34 | 51 | 5          | 5<br>1  | 2638062<br>9848                 | 45385<br>192 |
| 20 | 52                      | 44 | 30 | 232  | 44 | 30 | 5          | 4<br>0  | 2628214<br>9865                 | 45193<br>192 |
| 30 | 52                      | 54 | 18 | 232  | 54 | 18 | 5          | 4<br>1  | 2618349<br>9882                 | 45001<br>192 |
| 40 | 53                      | 4  | 6  | 233  | 4  | 6  | 5          | 3<br>0  | 2608467<br>9898                 | 44809<br>192 |
| 50 | 53                      | 13 | 54 | 233  | 13 | 54 | 5          | 3<br>1  | 2598569<br>9914                 | 44617<br>192 |
| 21 | 53                      | 23 | 41 | 233  | 23 | 41 | 5          | 2<br>0  | 2588655<br>9930                 | 44425<br>192 |



8 m

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli- | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|----------------------|------------|
|    | par                     | /  | // | par. | /  | // | /          | // |                      |            |
| 21 | 53                      | 23 | 41 | 233  | 23 | 41 | 5          | 2  | 2588655              | 44425      |
| 10 | 53                      | 33 | 28 | 233  | 33 | 28 | 5          | 2  | 2578725              | 44233      |
|    |                         | 9  | 47 |      |    |    |            | 1  | 9946                 | 192        |
| 20 | 53                      | 43 | 15 | 233  | 43 | 15 | 5          | 1  | 2568779              | 44041      |
|    |                         | 9  | 47 |      |    |    |            | 0  | 9962                 | 192        |
| 30 | 53                      | 53 | 2  | 233  | 53 | 2  | 5          | 1  | 2558817              | 43849      |
|    |                         | 9  | 46 |      |    |    |            | 1  | 9979                 | 192        |
| 40 | 54                      | 2  | 48 | 234  | 2  | 48 | 5          | 0  | 2548838              | 43657      |
|    |                         | 9  | 46 |      |    |    |            | 1  | 9993                 | 193        |
| 50 | 54                      | 12 | 34 | 234  | 12 | 34 | 4          | 59 | 2538845              | 43464      |
|    |                         | 9  | 46 |      |    |    |            | 0  | 10009                | 193        |
| 22 | 54                      | 22 | 20 | 234  | 22 | 20 | 4          | 59 | 2528836              | 43271      |
|    |                         | 9  | 45 |      |    |    |            | 1  | 10025                | 192        |
| 10 | 54                      | 32 | 5  | 234  | 32 | 5  | 4          | 58 | 2518811              | 43079      |
|    |                         | 9  | 45 |      |    |    |            | 1  | 10041                | 193        |
| 20 | 54                      | 41 | 50 | 234  | 41 | 50 | 4          | 57 | 2508770              | 42886      |
|    |                         | 9  | 45 |      |    |    |            | 0  | 10056                | 193        |
| 30 | 54                      | 51 | 35 | 234  | 51 | 35 | 4          | 57 | 2498714              | 42693      |
|    |                         | 9  | 45 |      |    |    |            | 1  | 10071                | 192        |
| 40 | 55                      | 1  | 20 | 335  | 1  | 20 | 4          | 56 | 2488643              | 42501      |
|    |                         | 9  | 44 |      |    |    |            | 0  | 10086                | 193        |
| 50 | 55                      | 11 | 4  | 235  | 11 | 4  | 4          | 56 | 2478557              | 42308      |
|    |                         | 9  | 44 |      |    |    |            | 1  | 10099                | 193        |
| 23 | 55                      | 20 | 48 | 235  | 20 | 48 | 4          | 55 | 2468456              | 42115      |
|    |                         | 9  | 44 |      |    |    |            | 0  | 10117                | 193        |
| 10 | 55                      | 30 | 32 | 235  | 30 | 32 | 4          | 55 | 2458339              | 41922      |
|    |                         | 9  | 43 |      |    |    |            | 1  | 10132                | 193        |
| 20 | 55                      | 40 | 15 | 235  | 40 | 15 | 4          | 54 | 2448207              | 41729      |
|    |                         | 9  | 43 |      |    |    |            | 1  | 10147                | 192        |
| 30 | 55                      | 49 | 58 | 235  | 49 | 58 | 4          | 53 | 2438060              | 41537      |
|    |                         | 9  | 43 |      |    |    |            | 0  | 10162                | 193        |
| 40 | 55                      | 59 | 41 | 235  | 59 | 41 | 4          | 53 | 2427898              | 41344      |
|    |                         | 9  | 43 |      |    |    |            | 1  | 10176                | 193        |
| 50 | 56                      | 9  | 24 | 236  | 9  | 24 | 4          | 52 | 2417722              | 41151      |
|    |                         | 9  | 42 |      |    |    |            | 1  | 10191                | 193        |
| 24 | 56                      | 19 | 6  | 236  | 19 | 6  | 4          | 51 | 2407531              | 40958      |
|    |                         | 9  | 42 |      |    |    |            | 0  | 10206                | 193        |

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# CANON MEDIATIONVM

| <div> <div>8</div> <div>m</div> </div> |    |    |      |     |    |            |    |                      |         |            |  |
|----------------------------------------|----|----|------|-----|----|------------|----|----------------------|---------|------------|--|
| Radix ascensio-<br>num.                |    |    |      |     |    | Dña<br>Ad. |    | Numerus<br>multipli- |         | Dña<br>Ad. |  |
| par.                                   | /  | // | par. | /   | // | /          | // | candus.              |         |            |  |
| <b>24</b>                              | 56 | 19 | 6    | 236 | 19 | 6          | 4  | 51                   | 2407531 | 40958      |  |
| 10                                     | 56 | 28 | 48   | 236 | 8  | 48         | 4  | 51                   | 2397325 | 40765      |  |
|                                        |    | 9  | 42   |     |    |            |    | 1                    | 10220   | 193        |  |
| 20                                     | 56 | 38 | 30   | 236 | 38 | 30         | 4  | 50                   | 2387105 | 40572      |  |
|                                        |    | 9  | 42   |     |    |            |    | 1                    | 10234   | 193        |  |
| 30                                     | 56 | 48 | 12   | 236 | 48 | 12         | 4  | 49                   | 2376871 | 40379      |  |
|                                        |    | 9  | 41   |     |    |            |    | 0                    | 10248   | 193        |  |
| 40                                     | 56 | 57 | 53   | 236 | 57 | 53         | 4  | 49                   | 2366623 | 40186      |  |
|                                        |    | 9  | 41   |     |    |            |    | 1                    | 10262   | 193        |  |
| 50                                     | 57 | 7  | 34   | 237 | 7  | 34         | 4  | 48                   | 2356361 | 39993      |  |
|                                        |    | 9  | 41   |     |    |            |    | 1                    | 10276   | 193        |  |
| <b>25</b>                              | 57 | 17 | 15   | 237 | 17 | 15         | 4  | 47                   | 2346085 | 39800      |  |
|                                        |    | 9  | 41   |     |    |            |    | 1                    | 10290   | 193        |  |
| 10                                     | 57 | 26 | 56   | 237 | 26 | 56         | 4  | 46                   | 2335795 | 39607      |  |
|                                        |    | 9  | 40   |     |    |            |    | 0                    | 10304   | 193        |  |
| 20                                     | 57 | 36 | 36   | 237 | 36 | 36         | 4  | 46                   | 2325491 | 39414      |  |
|                                        |    | 9  | 40   |     |    |            |    | 1                    | 10317   | 193        |  |
| 30                                     | 57 | 46 | 16   | 237 | 46 | 16         | 4  | 45                   | 2315174 | 39221      |  |
|                                        |    | 9  | 40   |     |    |            |    | 1                    | 10331   | 193        |  |
| 40                                     | 57 | 55 | 56   | 237 | 55 | 56         | 4  | 44                   | 2304843 | 39028      |  |
|                                        |    | 9  | 40   |     |    |            |    | 1                    | 10344   | 193        |  |
| 50                                     | 58 | 5  | 36   | 238 | 5  | 36         | 4  | 43                   | 2294499 | 38835      |  |
|                                        |    | 9  | 39   |     |    |            |    | 1                    | 10357   | 194        |  |
| <b>26</b>                              | 58 | 15 | 15   | 238 | 15 | 15         | 4  | 42                   | 2284142 | 38641      |  |
|                                        |    | 9  | 39   |     |    |            |    | 0                    | 10372   | 193        |  |
| 10                                     | 58 | 24 | 54   | 238 | 24 | 54         | 4  | 42                   | 2273770 | 38448      |  |
|                                        |    | 9  | 38   |     |    |            |    | 1                    | 10384   | 193        |  |
| 20                                     | 58 | 34 | 32   | 238 | 34 | 32         | 4  | 41                   | 2263386 | 38255      |  |
|                                        |    | 9  | 38   |     |    |            |    | 1                    | 10397   | 193        |  |
| 30                                     | 58 | 44 | 10   | 238 | 44 | 10         | 4  | 40                   | 2252989 | 38062      |  |
|                                        |    | 9  | 38   |     |    |            |    | 1                    | 10410   | 194        |  |
| 40                                     | 58 | 53 | 48   | 238 | 53 | 48         | 4  | 39                   | 2242579 | 37868      |  |
|                                        |    | 9  | 38   |     |    |            |    | 0                    | 10423   | 193        |  |
| 50                                     | 59 | 3  | 26   | 239 | 3  | 26         | 4  | 39                   | 2232156 | 37675      |  |
|                                        |    | 9  | 37   |     |    |            |    | 1                    | 10436   | 194        |  |
| <b>27</b>                              | 59 | 13 | 3    | 239 | 13 | 3          | 4  | 38                   | 2221720 | 37481      |  |
|                                        |    | 9  | 37   |     |    |            |    | 1                    | 10449   | 193        |  |



8 m

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multiplis | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|----------------------|------------|
|    | par                     | /  | // | par. | /  | // | /          | // |                      |            |
| 27 | 59                      | 13 | 3  | 239  | 13 | 3  | 4          | 38 | 2221710              | 37481      |
| 10 | 59                      | 22 | 40 | 239  | 22 | 40 | 4          | 37 | 2221271              | 37288      |
|    |                         | 9  | 37 |      |    |    | 4          | 1  | 10462                | 193        |
| 20 | 59                      | 32 | 17 | 239  | 32 | 17 | 4          | 36 | 2200809              | 37095      |
|    |                         | 9  | 37 |      |    |    |            | 1  | 10475                | 194        |
| 30 | 59                      | 41 | 54 | 239  | 41 | 54 | 4          | 35 | 2190334              | 36901      |
|    |                         | 9  | 37 |      |    |    |            | 0  | 10488                | 193        |
| 40 | 59                      | 51 | 31 | 239  | 51 | 31 | 4          | 35 | 2179846              | 36708      |
|    |                         | 9  | 36 |      |    |    |            | 1  | 10500                | 194        |
| 50 | 60                      | 1  | 7  | 240  | 1  | 7  | 4          | 34 | 2169346              | 36514      |
|    |                         | 9  | 36 |      |    |    |            | 1  | 10514                | 193        |
| 28 | 60                      | 10 | 43 | 240  | 10 | 43 | 4          | 33 | 2158834              | 36321      |
|    |                         | 9  | 36 |      |    |    |            | 1  | 10524                | 193        |
| 10 | 60                      | 20 | 19 | 240  | 20 | 19 | 4          | 32 | 2148310              | 36128      |
|    |                         | 9  | 36 |      |    |    |            | 1  | 10537                | 194        |
| 20 | 60                      | 29 | 55 | 240  | 29 | 55 | 4          | 31 | 2137773              | 35934      |
|    |                         | 9  | 36 |      |    |    |            | 1  | 10549                | 193        |
| 30 | 60                      | 39 | 31 | 240  | 39 | 31 | 4          | 30 | 2127224              | 35741      |
|    |                         | 9  | 35 |      |    |    |            | 1  | 10561                | 193        |
| 40 | 60                      | 49 | 6  | 240  | 49 | 6  | 4          | 29 | 2116663              | 35548      |
|    |                         | 9  | 35 |      |    |    |            | 1  | 10573                | 193        |
| 50 | 60                      | 58 | 41 | 240  | 58 | 41 | 4          | 28 | 2106090              | 35355      |
|    |                         | 9  | 35 |      |    |    |            | 1  | 10584                | 193        |
| 29 | 61                      | 8  | 16 | 241  | 8  | 16 | 4          | 27 | 2095506              | 35162      |
|    |                         | 9  | 35 |      |    |    |            | 1  | 10596                | 193        |
| 10 | 61                      | 17 | 51 | 241  | 17 | 51 | 4          | 26 | 2084910              | 34969      |
|    |                         | 9  | 34 |      |    |    |            | 1  | 10608                | 193        |
| 20 | 61                      | 27 | 25 | 241  | 27 | 25 | 4          | 25 | 2074302              | 34776      |
|    |                         | 9  | 34 |      |    |    |            | 1  | 10619                | 193        |
| 30 | 61                      | 36 | 59 | 241  | 36 | 59 | 4          | 24 | 2063683              | 34583      |
|    |                         | 9  | 34 |      |    |    |            | 1  | 10630                | 193        |
| 40 | 61                      | 46 | 33 | 241  | 46 | 33 | 4          | 23 | 2053053              | 34390      |
|    |                         | 9  | 33 |      |    |    |            | 1  | 10642                | 193        |
| 50 | 61                      | 56 | 6  | 241  | 56 | 6  | 4          | 22 | 2042411              | 34197      |
|    |                         | 9  | 33 |      |    |    |            | 1  | 10653                | 193        |
| 30 | 62                      | 5  | 39 | 242  | 5  | 39 | 4          | 21 | 2031758              | 34004      |
|    |                         | 9  | 33 |      |    |    |            | 1  | 10665                | 193        |



# CANON MEDIATIONVM

## II    †

|          | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multiplic. | Dra<br>Ad. |
|----------|-------------------------|----|----|------|----|----|------------|----|-----------------------|------------|
|          | par.                    | /  | // | par. | /  | // | /          | // |                       |            |
| <b>O</b> | 62                      | 5  | 39 | 242  | 5  | 39 | 4          | 21 | 2031758               | 34000      |
| 10       | 62                      | 15 | 12 | 242  | 15 | 12 | 4          | 20 | 2021093               | 33811      |
|          |                         | 9  | 33 |      |    |    |            | 1  | 10676                 | 193        |
| 20       | 62                      | 24 | 45 | 242  | 24 | 45 | 4          | 19 | 2010417               | 33618      |
|          |                         | 9  | 33 |      |    |    |            | 1  | 10687                 | 193        |
| 30       | 62                      | 34 | 18 | 242  | 34 | 18 | 4          | 18 | 1999730               | 33425      |
|          |                         | 9  | 32 |      |    |    |            | 1  | 10698                 | 193        |
| 40       | 62                      | 43 | 50 | 242  | 43 | 50 | 4          | 17 | 1989032               | 33232      |
|          |                         | 9  | 32 |      |    |    |            | 1  | 10709                 | 193        |
| 50       | 62                      | 53 | 22 | 242  | 53 | 22 | 4          | 16 | 1978323               | 33039      |
|          |                         | 9  | 32 |      |    |    |            | 1  | 10720                 | 192        |
| <b>I</b> | 62                      | 2  | 54 | 242  | 2  | 54 | 4          | 15 | 1967603               | 32847      |
|          |                         | 9  | 31 |      |    |    |            | 1  | 10731                 | 193        |
| 10       | 63                      | 12 | 25 | 243  | 12 | 25 | 4          | 14 | 1956872               | 32654      |
|          |                         | 9  | 31 |      |    |    |            | 1  | 10742                 | 193        |
| 20       | 63                      | 21 | 56 | 243  | 21 | 56 | 4          | 13 | 1946130               | 32461      |
|          |                         | 9  | 31 |      |    |    |            | 1  | 10752                 | 193        |
| 30       | 63                      | 31 | 27 | 343  | 31 | 27 | 4          | 12 | 1935378               | 32268      |
|          |                         | 9  | 31 |      |    |    |            | 1  | 10762                 | 192        |
| 40       | 63                      | 40 | 58 | 243  | 40 | 58 | 4          | 11 | 1924616               | 32076      |
|          |                         | 9  | 31 |      |    |    |            | 1  | 10773                 | 193        |
| 50       | 63                      | 50 | 29 | 243  | 50 | 29 | 4          | 10 | 1913843               | 31883      |
|          |                         | 9  | 30 |      |    |    |            | 1  | 10783                 | 192        |
| <b>2</b> | 63                      | 59 | 59 | 243  | 59 | 59 | 4          | 9  | 1903060               | 31691      |
|          |                         | 9  | 30 |      |    |    |            | 1  | 10794                 | 193        |
| 10       | 64                      | 9  | 29 | 244  | 9  | 29 | 4          | 8  | 1892266               | 31498      |
|          |                         | 9  | 30 |      |    |    |            | 1  | 10804                 | 193        |
| 20       | 64                      | 18 | 59 | 244  | 18 | 59 | 4          | 7  | 1881462               | 31305      |
|          |                         | 9  | 30 |      |    |    |            | 1  | 10814                 | 192        |
| 30       | 64                      | 28 | 29 | 244  | 28 | 29 | 4          | 6  | 1870648               | 31113      |
|          |                         | 9  | 30 |      |    |    |            | 1  | 10824                 | 193        |
| 40       | 64                      | 37 | 59 | 244  | 37 | 59 | 4          | 5  | 1859824               | 30920      |
|          |                         | 9  | 30 |      |    |    |            | 2  | 10834                 | 192        |
| 50       | 64                      | 47 | 29 | 244  | 47 | 29 | 4          | 3  | 1848990               | 30728      |
|          |                         | 9  | 29 |      |    |    |            | 1  | 10844                 | 192        |
| <b>3</b> | 64                      | 56 | 58 | 244  | 56 | 58 | 4          | 2  | 1838146               | 30536      |
|          |                         | 9  | 29 |      |    |    |            | 1  | 10854                 | 193        |



## II †

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra.<br>Ad. |    | Numerus<br>multipli-<br>candus. | Dra.<br>Ad. |  |
|----|-------------------------|----|----|------|----|----|-------------|----|---------------------------------|-------------|--|
|    | Par                     | /  | // | Par. | /  | // | /           | // |                                 |             |  |
| 3  | 64                      | 56 | 58 | 244  | 56 | 58 | 4           | 2  | 1838146                         | 30536       |  |
| 10 | 65                      | 6  | 27 | 245  | 6  | 27 | 4           | 1  | 1827292                         | 30343       |  |
|    |                         | 9  | 29 |      |    |    |             | 2  | 10863                           | 192         |  |
| 20 | 65                      | 15 | 56 | 245  | 15 | 56 | 3           | 59 | 1816429                         | 30151       |  |
|    |                         | 9  | 28 |      |    |    |             | 1  | 10873                           | 192         |  |
| 30 | 66                      | 25 | 24 | 245  | 25 | 24 | 3           | 58 | 1805556                         | 29959       |  |
|    |                         | 9  | 28 |      |    |    |             | 1  | 10882                           | 192         |  |
| 40 | 65                      | 34 | 52 | 245  | 34 | 52 | 3           | 57 | 1794674                         | 29767       |  |
|    |                         | 9  | 28 |      |    |    |             | 1  | 10891                           | 192         |  |
| 50 | 65                      | 44 | 20 | 245  | 44 | 20 | 3           | 56 | 1783783                         | 29575       |  |
|    |                         | 9  | 28 |      |    |    |             | 1  | 10901                           | 192         |  |
| 4  | 65                      | 53 | 48 | 245  | 53 | 48 | 3           | 55 | 1772882                         | 29383       |  |
|    |                         | 9  | 28 |      |    |    |             | 1  | 10910                           | 192         |  |
| 10 | 66                      | 3  | 16 | 246  | 3  | 16 | 3           | 54 | 1761972                         | 29191       |  |
|    |                         | 9  | 27 |      |    |    |             | 2  | 10919                           | 192         |  |
| 20 | 66                      | 12 | 43 | 246  | 12 | 43 | 3           | 52 | 1751053                         | 28999       |  |
|    |                         | 9  | 27 |      |    |    |             | 1  | 10928                           | 192         |  |
| 30 | 66                      | 22 | 10 | 246  | 22 | 10 | 3           | 51 | 1740125                         | 28807       |  |
|    |                         | 9  | 27 |      |    |    |             | 1  | 10938                           | 192         |  |
| 40 | 66                      | 31 | 37 | 246  | 31 | 37 | 3           | 50 | 1729187                         | 28615       |  |
|    |                         | 9  | 27 |      |    |    |             | 1  | 10947                           | 192         |  |
| 50 | 66                      | 41 | 4  | 246  | 41 | 4  | 3           | 49 | 1718240                         | 28423       |  |
|    |                         | 9  | 26 |      |    |    |             | 1  | 10956                           | 192         |  |
| 5  | 66                      | 50 | 30 | 246  | 50 | 30 | 3           | 48 | 1707284                         | 28231       |  |
|    |                         | 9  | 26 |      |    |    |             | 2  | 10965                           | 192         |  |
| 10 | 66                      | 59 | 56 | 246  | 59 | 56 | 3           | 46 | 1696319                         | 28039       |  |
|    |                         | 9  | 26 |      |    |    |             | 1  | 10974                           | 191         |  |
| 20 | 67                      | 9  | 22 | 247  | 9  | 22 | 3           | 45 | 1685345                         | 27848       |  |
|    |                         | 9  | 26 |      |    |    |             | 1  | 10983                           | 192         |  |
| 30 | 67                      | 18 | 48 | 247  | 18 | 48 | 3           | 44 | 1674362                         | 27656       |  |
|    |                         | 9  | 26 |      |    |    |             | 1  | 10992                           | 192         |  |
| 40 | 67                      | 28 | 14 | 247  | 28 | 14 | 3           | 43 | 1663370                         | 27464       |  |
|    |                         | 9  | 26 |      |    |    |             | 1  | 11000                           | 191         |  |
| 50 | 67                      | 37 | 40 | 247  | 37 | 40 | 3           | 42 | 1652370                         | 27273       |  |
|    |                         | 9  | 25 |      |    |    |             | 2  | 11009                           | 192         |  |
| 6  | 67                      | 47 | 5  | 247  | 47 | 5  | 3           | 40 | 1641361                         | 27081       |  |
|    |                         | 9  | 25 |      |    |    |             | 1  | 11018                           | 191         |  |



# CANON MEDIATIONVM

## II †

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multiplic. | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|-----------------------|------------|
|    | par.                    | /  | // | par. | /  | // | /          | // |                       |            |
| 6  | 67                      | 47 | 5  | 247  | 47 | 5  | 3          | 40 | 1641361               | 2708       |
| 10 | 67                      | 56 | 30 | 247  | 56 | 30 | 3          | 39 | 1630343               | 26890      |
|    |                         | 9  | 25 |      |    |    |            | 1  | 11026                 | 192        |
| 20 | 68                      | 5  | 55 | 248  | 5  | 55 | 3          | 38 | 1619317               | 26698      |
|    |                         | 9  | 25 |      |    |    |            | 2  | 11034                 | 191        |
| 30 | 68                      | 15 | 20 | 248  | 15 | 20 | 3          | 36 | 1608283               | 26507      |
|    |                         | 9  | 24 |      |    |    |            | 1  | 11042                 | 191        |
| 40 | 68                      | 24 | 44 | 248  | 24 | 44 | 3          | 35 | 1597241               | 26316      |
|    |                         | 9  | 24 |      |    |    |            | 1  | 11050                 | 192        |
| 50 | 68                      | 34 | 8  | 248  | 34 | 8  | 3          | 34 | 1586191               | 26124      |
|    |                         | 9  | 24 |      |    |    |            | 1  | 11058                 | 191        |
| 7  | 68                      | 43 | 32 | 248  | 43 | 32 | 3          | 33 | 1575133               | 25933      |
|    |                         | 9  | 24 |      |    |    |            | 2  | 11066                 | 191        |
| 10 | 68                      | 52 | 56 | 248  | 52 | 56 | 3          | 31 | 1564067               | 25742      |
|    |                         |    |    |      |    |    |            | 1  | 11074                 | 191        |
| 20 | 69                      | 2  | 20 | 249  | 2  | 20 | 3          | 30 | 1552993               | 25551      |
|    |                         | 9  | 24 |      |    |    |            | 1  | 11082                 | 191        |
| 30 | 69                      | 11 | 44 | 249  | 11 | 44 | 3          | 29 | 1541911               | 25360      |
|    |                         | 9  | 23 |      |    |    |            | 1  | 11090                 | 191        |
| 40 | 69                      | 21 | 7  | 249  | 21 | 7  | 3          | 28 | 1530821               | 25169      |
|    |                         | 9  | 23 |      |    |    |            | 2  | 11098                 | 196        |
| 50 | 69                      | 30 | 30 | 249  | 30 | 30 | 3          | 26 | 1519723               | 24978      |
|    |                         | 9  | 23 |      |    |    |            | 1  | 11105                 | 191        |
| 8  | 69                      | 39 | 53 | 249  | 39 | 53 | 3          | 25 | 1508618               | 24787      |
|    |                         | 9  | 23 |      |    |    |            | 2  | 11113                 | 191        |
| 10 | 69                      | 49 | 16 | 249  | 49 | 16 | 3          | 23 | 1497505               | 24596      |
|    |                         | 9  | 23 |      |    |    |            | 1  | 11120                 | 191        |
| 20 | 69                      | 58 | 39 | 249  | 58 | 39 | 3          | 22 | 1486385               | 24405      |
|    |                         | 9  | 23 |      |    |    |            | 1  | 11127                 | 190        |
| 30 | 70                      | 8  | 2  | 250  | 8  | 2  | 3          | 21 | 1475258               | 24215      |
|    |                         | 9  | 22 |      |    |    |            | 1  | 11135                 | 191        |
| 40 | 70                      | 17 | 24 | 250  | 17 | 24 | 3          | 20 | 1464123               | 24024      |
|    |                         | 9  | 22 |      |    |    |            | 2  | 11142                 | 190        |
| 50 | 70                      | 26 | 46 | 250  | 26 | 46 | 3          | 18 | 1452981               | 23834      |
|    |                         | 9  | 22 |      |    |    |            | 1  | 11149                 | 191        |
| 9  | 70                      | 36 | 8  | 250  | 36 | 8  | 3          | 17 | 1441832               | 23643      |
|    |                         | 9  | 22 |      |    |    |            | 1  | 11157                 | 191        |



## II ‡

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra.<br>Ad. |    | Numerus<br>multipli-<br>candus. | Dra.<br>Ad. |  |
|----|-------------------------|----|----|------|----|----|-------------|----|---------------------------------|-------------|--|
|    | Par                     | /  | // | Par. | /  | // | /           | // |                                 |             |  |
| 9  | 70                      | 36 | 8  | 250  | 36 | 8  | 3           | 17 | 1441832                         | 23043       |  |
| 10 | 70                      | 45 | 30 | 250  | 45 | 30 | 3           | 15 | 1430675                         | 23452       |  |
|    |                         | 9  | 21 |      |    |    |             | 1  | 11164                           | 190         |  |
| 20 | 70                      | 54 | 51 | 250  | 54 | 51 | 3           | 14 | 1419511                         | 23262       |  |
|    |                         | 9  | 21 |      |    |    |             | 1  | 11171                           | 190         |  |
| 30 | 71                      | 4  | 12 | 251  | 4  | 12 | 3           | 13 | 1408340                         | 23072       |  |
|    |                         | 9  | 21 |      |    |    |             | 1  | 11178                           | 191         |  |
| 40 | 71                      | 13 | 33 | 251  | 13 | 33 | 3           | 12 | 1397162                         | 22881       |  |
|    |                         | 9  | 21 |      |    |    |             | 2  | 11185                           | 190         |  |
| 50 | 71                      | 22 | 54 | 251  | 22 | 54 | 3           | 16 | 1385977                         | 22691       |  |
|    |                         | 9  | 21 |      |    |    |             | 1  | 11192                           | 190         |  |
| 0  | 71                      | 32 | 15 | 251  | 32 | 15 | 3           | 9  | 1374785                         | 22501       |  |
|    |                         | 9  | 21 |      |    |    |             | 2  | 11199                           | 190         |  |
| 10 | 71                      | 41 | 36 | 251  | 41 | 36 | 3           | 7  | 1363586                         | 22311       |  |
|    |                         | 9  | 21 |      |    |    |             | 1  | 11205                           | 190         |  |
| 20 | 71                      | 50 | 57 | 251  | 50 | 57 | 3           | 6  | 1352381                         | 22121       |  |
|    |                         | 9  | 20 |      |    |    |             | 1  | 11212                           | 190         |  |
| 30 | 72                      | 0  | 17 | 252  | 0  | 17 | 3           | 5  | 1341169                         | 21931       |  |
|    |                         | 9  | 20 |      |    |    |             | 1  | 11218                           | 190         |  |
| 40 | 72                      | 9  | 37 | 252  | 9  | 37 | 3           | 4  | 1329951                         | 21741       |  |
|    |                         | 9  | 20 |      |    |    |             | 2  | 11225                           | 190         |  |
| 50 | 72                      | 18 | 57 | 252  | 18 | 57 | 3           | 2  | 1318726                         | 21551       |  |
|    |                         | 9  | 20 |      |    |    |             | 1  | 11231                           | 190         |  |
| 11 | 72                      | 28 | 17 | 252  | 28 | 17 | 3           | 1  | 1307495                         | 21361       |  |
|    |                         | 9  | 20 |      |    |    |             | 2  | 11238                           | 190         |  |
| 10 | 72                      | 37 | 37 | 252  | 37 | 37 | 2           | 59 | 1296257                         | 21171       |  |
|    |                         | 9  | 19 |      |    |    |             | 1  | 11244                           | 190         |  |
| 20 | 72                      | 46 | 56 | 252  | 46 | 56 | 2           | 58 | 1285013                         | 20981       |  |
|    |                         | 9  | 19 |      |    |    |             | 1  | 11250                           | 190         |  |
| 30 | 72                      | 56 | 15 | 252  | 56 | 15 | 2           | 57 | 1273763                         | 20791       |  |
|    |                         | 9  | 19 |      |    |    |             | 1  | 11256                           | 190         |  |
| 40 | 73                      | 5  | 34 | 253  | 5  | 34 | 2           | 56 | 1262507                         | 20602       |  |
|    |                         | 9  | 19 |      |    |    |             | 2  | 11262                           | 190         |  |
| 50 | 73                      | 14 | 53 | 253  | 14 | 53 | 2           | 54 | 1251245                         | 20412       |  |
|    |                         | 9  | 19 |      |    |    |             | 1  | 11268                           | 189         |  |
| 2  | 73                      | 24 | 12 | 253  | 24 | 12 | 2           | 53 | 1239977                         | 20223       |  |
|    |                         |    |    |      |    |    |             |    | 11274                           | 190         |  |



# CANON MEDIATIONVM

## II †

|           | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli-<br>candus. | Dra<br>Ad. |
|-----------|-------------------------|----|----|------|----|----|------------|----|---------------------------------|------------|
|           | par.                    | /  | // | par. | /  | // | /          | // |                                 |            |
| <b>I2</b> | 73                      | 24 | 12 | 253  | 24 | 12 | 2          | 53 | 1239977                         | 20223      |
| 10        | 73                      | 33 | 31 | 253  | 33 | 31 | 2          | 51 | 1228703                         | 20033      |
|           |                         | 9  | 19 |      |    |    |            | 1  | 11280                           | 189        |
| 20        | 73                      | 42 | 50 | 253  | 42 | 50 | 2          | 50 | 1217423                         | 19844      |
|           |                         | 9  | 18 |      |    |    |            | 1  | 11286                           | 190        |
| 30        | 73                      | 52 | 8  | 253  | 52 | 8  | 2          | 49 | 1206137                         | 19654      |
|           |                         | 9  | 18 |      |    |    |            | 1  | 11292                           | 189        |
| 40        | 74                      | 1  | 26 | 254  | 1  | 26 | 2          | 48 | 1194845                         | 19465      |
|           |                         | 9  | 18 |      |    |    |            | 2  | 11298                           | 189        |
| 50        | 74                      | 10 | 44 | 254  | 10 | 44 | 2          | 46 | 1183547                         | 19276      |
|           |                         | 9  | 18 |      |    |    |            | 1  | 11304                           | 189        |
| <b>I3</b> | 74                      | 20 | 2  | 254  | 20 | 2  | 2          | 45 | 1172243                         | 19087      |
|           |                         | 9  | 18 |      |    |    |            | 2  | 11310                           | 189        |
| 10        | 74                      | 29 | 20 | 254  | 29 | 20 | 2          | 43 | 1160933                         | 18898      |
|           |                         | 9  | 18 |      |    |    |            | 1  | 11316                           | 189        |
| 20        | 74                      | 38 | 38 | 254  | 38 | 38 | 2          | 42 | 1149617                         | 18709      |
|           |                         | 9  | 18 |      |    |    |            | 2  | 11321                           | 189        |
| 30        | 74                      | 47 | 56 | 254  | 47 | 56 | 2          | 40 | 1138296                         | 18520      |
|           |                         | 9  | 17 |      |    |    |            | 1  | 11326                           | 189        |
| 40        | 74                      | 57 | 13 | 254  | 57 | 13 | 2          | 39 | 1126970                         | 18331      |
|           |                         | 9  | 17 |      |    |    |            | 2  | 11331                           | 189        |
| 50        | 75                      | 6  | 30 | 255  | 6  | 30 | 2          | 37 | 1115639                         | 18142      |
|           |                         | 9  | 17 |      |    |    |            | 1  | 11337                           | 189        |
| <b>I4</b> | 75                      | 15 | 47 | 255  | 15 | 47 | 2          | 36 | 1104302                         | 17953      |
|           |                         | 9  | 17 |      |    |    |            | 1  | 11342                           | 189        |
| 10        | 75                      | 25 | 4  | 255  | 25 | 4  | 2          | 35 | 1092960                         | 17764      |
|           |                         | 9  | 17 |      |    |    |            | 2  | 11347                           | 189        |
| 20        | 75                      | 34 | 21 | 255  | 34 | 21 | 2          | 33 | 1081613                         | 17575      |
|           |                         | 9  | 17 |      |    |    |            | 1  | 11352                           | 189        |
| 30        | 75                      | 43 | 38 | 255  | 43 | 38 | 2          | 32 | 1070261                         | 17386      |
|           |                         | 9  | 17 |      |    |    |            | 2  | 11357                           | 189        |
| 40        | 75                      | 52 | 55 | 255  | 52 | 55 | 2          | 30 | 1058904                         | 17197      |
|           |                         | 9  | 16 |      |    |    |            | 1  | 11362                           | 188        |
| 50        | 76                      | 2  | 11 | 256  | 2  | 11 | 2          | 29 | 1047542                         | 17009      |
|           |                         | 9  | 16 |      |    |    |            | 2  | 11367                           | 188        |
| <b>I5</b> | 76                      | 11 | 27 | 256  | 11 | 27 | 2          | 27 | 1036175                         | 16821      |
|           |                         | 9  | 16 |      |    |    |            | 1  | 11372                           | 189        |



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|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli- | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|----------------------|------------|
|    | par                     | /  | // | par. | /  | // | /          | // |                      |            |
|    |                         |    |    |      |    |    |            |    | candus.              |            |
| 5  | 76                      | 11 | 27 | 256  | 11 | 27 | 2          | 27 | 1036175              | 16821      |
| 10 | 76                      | 20 | 43 | 256  | 20 | 43 | 2          | 25 | 1024803              | 16632      |
|    |                         | 9  | 16 |      |    |    |            | 1  | 11377                | 188        |
| 20 | 76                      | 29 | 59 | 256  | 29 | 59 | 2          | 24 | 1013426              | 16444      |
|    |                         | 9  | 16 |      |    |    |            | 2  | 11382                | 189        |
| 30 | 76                      | 39 | 15 | 256  | 39 | 15 | 2          | 22 | 1002044              | 16255      |
|    |                         | 9  | 16 |      |    |    |            | 2  | 11387                | 188        |
| 40 | 76                      | 48 | 31 | 256  | 48 | 31 | 2          | 20 | 990657               | 16067      |
|    |                         | 9  | 16 |      |    |    |            | 1  | 11391                | 188        |
| 50 | 76                      | 57 | 47 | 256  | 57 | 47 | 2          | 19 | 979266               | 15879      |
|    |                         | 9  | 16 |      |    |    |            | 2  | 11396                | 188        |
| 16 | 77                      | 7  | 3  | 257  | 7  | 3  | 2          | 17 | 967870               | 15691      |
|    |                         | 9  | 16 |      |    |    |            | 2  | 11400                | 189        |
| 10 | 77                      | 16 | 19 | 257  | 16 | 19 | 2          | 15 | 956470               | 15502      |
|    |                         | 9  | 15 |      |    |    |            | 1  | 11404                | 188        |
| 20 | 77                      | 25 | 34 | 257  | 25 | 34 | 2          | 14 | 945066               | 15314      |
|    |                         | 9  | 15 |      |    |    |            | 2  | 11409                | 188        |
| 30 | 77                      | 34 | 49 | 257  | 34 | 49 | 2          | 12 | 933657               | 15126      |
|    |                         | 9  | 15 |      |    |    |            | 2  | 11417                | 188        |
| 40 | 77                      | 44 | 4  | 257  | 44 | 4  | 2          | 10 | 922244               | 14938      |
|    |                         | 9  | 15 |      |    |    |            | 1  | 11417                | 188        |
| 50 | 77                      | 53 | 19 | 257  | 53 | 19 | 2          | 9  | 910827               | 14750      |
|    |                         | 9  | 15 |      |    |    |            | 2  | 11422                | 188        |
| 17 | 78                      | 2  | 34 | 258  | 2  | 34 | 2          | 7  | 899405               | 14562      |
|    |                         | 9  | 15 |      |    |    |            | 2  | 11426                | 188        |
| 10 | 78                      | 11 | 49 | 258  | 11 | 49 | 2          | 5  | 887979               | 14374      |
|    |                         | 9  | 15 |      |    |    |            | 1  | 11430                | 188        |
| 20 | 78                      | 21 | 4  | 258  | 21 | 4  | 2          | 4  | 876549               | 14186      |
|    |                         | 9  | 15 |      |    |    |            | 2  | 11434                | 188        |
| 30 | 78                      | 30 | 19 | 258  | 30 | 19 | 2          | 2  | 865115               | 13998      |
|    |                         | 9  | 14 |      |    |    |            | 1  | 11438                | 188        |
| 40 | 78                      | 39 | 33 | 258  | 39 | 33 | 2          | 1  | 853677               | 13810      |
|    |                         | 9  | 14 |      |    |    |            | 2  | 11442                | 188        |
| 50 | 78                      | 48 | 47 | 258  | 48 | 47 | 1          | 59 | 842235               | 13622      |
|    |                         | 9  | 14 |      |    |    |            | 1  | 11446                | 187        |
| 18 | 78                      | 58 | 1  | 258  | 58 | 1  | 1          | 58 | 830789               | 13435      |
|    |                         | 9  | 14 |      |    |    |            | 2  | 11450                | 188        |



# CANON MEDIATIONVM

## II T

|           | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli-<br>candus. | Dra<br>Ad. |
|-----------|-------------------------|----|----|------|----|----|------------|----|---------------------------------|------------|
|           | par.                    | /  | // | par. | /  | // | /          | // |                                 |            |
| <b>18</b> | 78                      | 58 | 1  | 258  | 58 | 1  | 1          | 58 | 830789                          | 1343       |
| 10        | 79                      | 7  | 15 | 259  | 7  | 15 | 1          | 56 | 819339                          | 13247      |
|           |                         | 9  | 14 |      |    |    |            | 1  | 11454                           | 188        |
| 20        | 79                      | 16 | 29 | 259  | 16 | 29 | 1          | 55 | 807885                          | 13059      |
|           |                         | 9  | 14 |      |    |    |            | 2  | 11458                           | 188        |
| 30        | 79                      | 25 | 43 | 259  | 25 | 43 | 1          | 53 | 796427                          | 12871      |
|           |                         | 9  | 14 |      |    |    |            | 1  | 11461                           | 187        |
| 40        | 79                      | 34 | 57 | 259  | 34 | 57 | 1          | 52 | 784966                          | 12684      |
|           |                         | 9  | 14 |      |    |    |            | 2  | 11465                           | 188        |
| 50        | 79                      | 44 | 11 | 259  | 44 | 11 | 1          | 50 | 773401                          | 12496      |
|           |                         | 9  | 13 |      |    |    |            | 1  | 11469                           | 187        |
| <b>19</b> | 79                      | 53 | 24 | 259  | 53 | 24 | 1          | 49 | 762032                          | 12309      |
|           |                         | 9  | 14 |      |    |    |            | 2  | 11472                           | 188        |
| 10        | 80                      | 2  | 38 | 260  | 2  | 38 | 1          | 47 | 750560                          | 12121      |
|           |                         | 9  | 13 |      |    |    |            | 1  | 11475                           | 188        |
| 20        | 80                      | 11 | 51 | 260  | 11 | 51 | 1          | 46 | 739085                          | 11933      |
|           |                         | 9  | 14 |      |    |    |            | 2  | 11479                           | 187        |
| 30        | 80                      | 21 | 5  | 260  | 21 | 5  | 1          | 44 | 727606                          | 11746      |
|           |                         | 9  | 13 |      |    |    |            | 1  | 11482                           | 187        |
| 40        | 80                      | 30 | 18 | 260  | 30 | 18 | 1          | 43 | 716124                          | 11559      |
|           |                         | 9  | 13 |      |    |    |            | 2  | 11485                           | 187        |
| 50        | 80                      | 39 | 31 | 260  | 39 | 31 | 1          | 41 | 704639                          | 11372      |
|           |                         | 9  | 13 |      |    |    |            | 1  | 11488                           | 187        |
| <b>20</b> | 80                      | 48 | 44 | 260  | 48 | 44 | 1          | 40 | 693151                          | 11185      |
|           |                         | 9  | 13 |      |    |    |            |    | 11491                           | 188        |
| 10        | 80                      | 57 | 57 | 260  | 57 | 57 | 1          | 38 | 681660                          | 10997      |
|           |                         | 9  | 13 |      |    |    |            |    | 11494                           | 187        |
| 20        | 81                      | 7  | 10 | 261  | 7  | 10 | 1          | 37 | 670166                          | 10810      |
|           |                         | 9  | 13 |      |    |    |            |    | 11497                           | 187        |
| 30        | 81                      | 16 | 23 | 261  | 16 | 23 | 1          | 35 | 658669                          | 10623      |
|           |                         | 9  | 13 |      |    |    |            |    | 11500                           | 187        |
| 40        | 81                      | 25 | 36 | 261  | 25 | 36 | 1          | 33 | 647169                          | 10436      |
|           |                         | 9  | 12 |      |    |    |            |    | 11503                           | 187        |
| 50        | 81                      | 34 | 48 | 261  | 34 | 48 | 1          | 32 | 635666                          | 10249      |
|           |                         | 9  | 12 |      |    |    |            |    | 11506                           | 187        |
| <b>21</b> | 81                      | 44 | 0  | 261  | 44 | 0  | 1          | 30 | 624160                          | 10062      |
|           |                         | 9  | 13 |      |    |    |            |    | 11509                           |            |



II T

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli- |  | Dra<br>Ad. |  |
|----|-------------------------|----|----|------|----|----|------------|----|----------------------|--|------------|--|
|    | par                     | /  | // | par. | /  | // | /          | // | candus.              |  |            |  |
| 21 | 81                      | 44 | 0  | 261  | 44 | 0  | 1          | 30 | 624160               |  | 10062      |  |
| 10 | 81                      | 53 | 13 | 261  | 53 | 13 | 1          | 28 | 612651               |  | 9875       |  |
|    |                         | 9  | 12 |      |    |    |            | 1  | 11512                |  | 187        |  |
| 20 | 82                      | 2  | 25 | 262  | 2  | 25 | 1          | 27 | 601139               |  | 9688       |  |
|    |                         | 9  | 13 |      |    |    |            | 2  | 11515                |  | 187        |  |
| 30 | 82                      | 11 | 38 | 262  | 11 | 38 | 1          | 25 | 589624               |  | 9501       |  |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11518                |  | 187        |  |
| 40 | 82                      | 20 | 50 | 262  | 20 | 50 | 1          | 23 | 578106               |  | 9314       |  |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11521                |  | 187        |  |
| 50 | 82                      | 30 | 2  | 262  | 30 | 2  | 1          | 21 | 566585               |  | 9127       |  |
|    |                         | 9  | 12 |      |    |    |            | 1  | 11524                |  | 187        |  |
| 22 | 82                      | 39 | 14 | 262  | 39 | 14 | 1          | 20 | 555061               |  | 8940       |  |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11526                |  | 187        |  |
| 10 | 82                      | 48 | 26 | 262  | 48 | 26 | 1          | 18 | 543535               |  | 8753       |  |
|    |                         | 9  | 12 |      |    |    |            | 1  | 11528                |  | 187        |  |
| 20 | 82                      | 57 | 38 | 262  | 57 | 38 | 1          | 17 | 532007               |  | 8566       |  |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11530                |  | 187        |  |
| 30 | 83                      | 6  | 50 | 263  | 6  | 50 | 1          | 15 | 520477               |  | 8379       |  |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11532                |  | 187        |  |
| 40 | 83                      | 16 | 2  | 263  | 16 | 2  | 1          | 13 | 508945               |  | 8192       |  |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11534                |  | 187        |  |
| 50 | 83                      | 25 | 14 | 263  | 25 | 14 | 1          | 11 | 497411               |  | 8005       |  |
|    |                         | 9  | 11 |      |    |    |            | 1  | 11537                |  | 186        |  |
| 23 | 83                      | 34 | 25 | 263  | 34 | 25 | 1          | 10 | 483874               |  | 7819       |  |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11539                |  | 187        |  |
| 10 | 83                      | 43 | 37 | 263  | 43 | 37 | 1          | 8  | 474335               |  | 7632       |  |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11541                |  | 187        |  |
| 20 | 83                      | 52 | 49 | 263  | 52 | 49 | 1          | 6  | 462794               |  | 7445       |  |
|    |                         | 9  | 12 |      |    |    |            | 1  | 11543                |  | 186        |  |
| 30 | 84                      | 2  | 1  | 264  | 2  | 1  | 1          | 5  | 451251               |  | 7259       |  |
|    |                         | 9  | 11 |      |    |    |            | 2  | 11545                |  | 186        |  |
| 40 | 84                      | 11 | 12 | 264  | 11 | 12 | 1          | 3  | 439706               |  | 7073       |  |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11547                |  | 187        |  |
| 50 | 84                      | 20 | 24 | 264  | 20 | 24 | 1          | 1  | 428159               |  | 6886       |  |
|    |                         | 9  | 11 |      |    |    |            | 2  | 11549                |  | 186        |  |
| 24 | 84                      | 29 | 35 | 264  | 29 | 35 | 0          | 59 | 416610               |  | 6700       |  |
|    |                         | 9  | 11 |      |    |    |            |    | 11551                |  | 186        |  |



# CANON MEDIATIONVM

## II †

|           | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multiplic. | Dra<br>Ad. |
|-----------|-------------------------|----|----|------|----|----|------------|----|-----------------------|------------|
|           | par.                    | /  | // | par. | /  | // | /          | // |                       |            |
| <b>24</b> | 84                      | 29 | 35 | 264  | 29 | 35 | 0          | 59 | 416610                | 6700       |
| 10        | 84                      | 38 | 46 | 264  | 38 | 46 | 0          | 57 | 405059                | 6514       |
|           |                         | 9  | 11 |      |    |    |            | 1  | 11553                 | 187        |
| 20        | 84                      | 47 | 57 | 264  | 47 | 57 | 0          | 56 | 393506                | 6327       |
|           |                         | 9  | 11 |      |    |    |            | 2  | 11555                 | 186        |
| 30        | 84                      | 57 | 8  | 264  | 57 | 8  | 0          | 54 | 381951                | 6141       |
|           |                         | 9  | 11 |      |    |    |            | 1  | 11557                 | 186        |
| 40        | 85                      | 6  | 19 | 265  | 6  | 19 | 0          | 53 | 370394                | 5955       |
|           |                         | 9  | 11 |      |    |    |            | 2  | 11558                 | 187        |
| 50        | 85                      | 15 | 30 | 265  | 15 | 30 | 0          | 51 | 358836                | 5768       |
|           |                         | 9  | 11 |      |    |    |            | 2  | 11560                 | 186        |
| <b>25</b> | 85                      | 24 | 41 | 265  | 24 | 41 | 0          | 49 | 347276                | 5582       |
|           |                         | 9  | 11 |      |    |    |            | 1  | 11561                 | 186        |
| 10        | 85                      | 33 | 52 | 265  | 33 | 52 | 0          | 48 | 335715                | 5396       |
|           |                         | 9  | 11 |      |    |    |            | 2  | 11563                 | 186        |
| 20        | 85                      | 43 | 3  | 265  | 43 | 3  | 0          | 46 | 324152                | 5210       |
|           |                         | 9  | 11 |      |    |    |            | 1  | 11564                 | 187        |
| 30        | 85                      | 52 | 14 | 265  | 52 | 14 | 0          | 45 | 312588                | 5023       |
|           |                         | 9  | 11 |      |    |    |            | 2  | 11566                 | 186        |
| 40        | 86                      | 1  | 25 | 266  | 1  | 25 | 0          | 43 | 301022                | 4837       |
|           |                         | 9  | 11 |      |    |    |            | 2  | 11567                 | 186        |
| 50        | 86                      | 10 | 36 | 266  | 10 | 36 | 0          | 41 | 289455                | 4651       |
|           |                         | 9  | 11 |      |    |    |            | 1  | 11568                 | 186        |
| <b>26</b> | 86                      | 19 | 47 | 266  | 19 | 47 | 0          | 40 | 277887                | 4465       |
|           |                         | 9  | 11 |      |    |    |            | 1  | 11569                 | 186        |
| 10        | 86                      | 28 | 58 | 266  | 28 | 58 | 0          | 39 | 266318                | 4279       |
|           |                         | 9  | 11 |      |    |    |            | 2  | 11571                 | 186        |
| 20        | 86                      | 38 | 9  | 266  | 38 | 9  | 0          | 37 | 254747                | 4093       |
|           |                         | 9  | 11 |      |    |    |            | 2  | 11572                 | 186        |
| 30        | 86                      | 47 | 20 | 266  | 47 | 20 | 0          | 35 | 243175                | 3907       |
|           |                         | 9  | 10 |      |    |    |            | 1  | 11573                 | 186        |
| 40        | 86                      | 56 | 30 | 266  | 56 | 30 | 0          | 34 | 231602                | 3721       |
|           |                         | 9  | 11 |      |    |    |            | 2  | 11574                 | 186        |
| 50        | 87                      | 5  | 41 | 267  | 5  | 41 | 0          | 32 | 220028                | 3535       |
|           |                         | 9  | 11 |      |    |    |            | 2  | 11575                 | 186        |
| <b>27</b> | 87                      | 14 | 52 | 267  | 14 | 52 | 0          | 30 | 208453                | 3349       |
|           |                         |    |    |      |    |    |            | 2  | 11576                 | 186        |



## II ‡

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra.<br>Ad. |    | Numerus<br>multipli- |  | Dra.<br>Ad. |  |
|----|-------------------------|----|----|------|----|----|-------------|----|----------------------|--|-------------|--|
|    | Par                     | /  | // | Par. | /  | // | /           | // | candus.              |  |             |  |
| 27 | 87                      | 14 | 52 | 267  | 14 | 52 | 0           | 30 | 208453               |  | 3349        |  |
| 10 | 87                      | 24 | 3  | 267  | 24 | 3  | 0           | 28 | 196877               |  | 3163        |  |
|    |                         | 9  | 11 |      |    |    |             | 1  | 11577                |  | 186         |  |
| 20 | 87                      | 33 | 14 | 267  | 33 | 14 | 0           | 27 | 185300               |  | 2977        |  |
|    |                         | 9  | 10 |      |    |    |             | 2  | 11578                |  | 186         |  |
| 30 | 87                      | 42 | 24 | 267  | 42 | 24 | 0           | 25 | 173722               |  | 2791        |  |
|    |                         | 9  | 11 |      |    |    |             | 2  | 11578                |  | 186         |  |
| 40 | 87                      | 51 | 35 | 267  | 51 | 35 | 0           | 23 | 162144               |  | 2605        |  |
|    |                         | 9  | 11 |      |    |    |             | 1  | 11579                |  | 186         |  |
| 50 | 88                      | 0  | 46 | 268  | 0  | 46 | 0           | 22 | 150565               |  | 2419        |  |
|    |                         | 9  | 10 |      |    |    |             | 2  | 11579                |  | 186         |  |
| 28 | 88                      | 9  | 56 | 268  | 9  | 56 | 0           | 20 | 138986               |  | 2233        |  |
|    |                         | 9  | 11 |      |    |    |             | 2  | 11580                |  | 186         |  |
| 10 | 88                      | 19 | 7  | 268  | 19 | 7  | 0           | 18 | 127406               |  | 2047        |  |
|    |                         | 9  | 10 |      |    |    |             | 1  | 11581                |  | 186         |  |
| 20 | 88                      | 28 | 17 | 268  | 28 | 17 | 0           | 17 | 115825               |  | 1861        |  |
|    |                         | 9  | 11 |      |    |    |             | 2  | 11581                |  | 186         |  |
| 30 | 88                      | 37 | 28 | 268  | 37 | 28 | 0           | 15 | 104244               |  | 1675        |  |
|    |                         | 9  | 10 |      |    |    |             | 2  | 11582                |  | 186         |  |
| 40 | 88                      | 46 | 38 | 268  | 46 | 38 | 0           | 13 | 92662                |  | 1489        |  |
|    |                         | 9  | 11 |      |    |    |             | 2  | 11582                |  | 186         |  |
| 50 | 88                      | 55 | 49 | 268  | 55 | 49 | 0           | 11 | 81080                |  | 1303        |  |
|    |                         | 9  | 10 |      |    |    |             | 1  | 11582                |  | 186         |  |
| 29 | 89                      | 4  | 59 | 269  | 4  | 59 | 0           | 10 | 69498                |  | 1117        |  |
|    |                         | 9  | 10 |      |    |    |             | 2  | 11583                |  | 187         |  |
| 10 | 89                      | 14 | 9  | 269  | 14 | 9  | 0           | 8  | 57915                |  | 930         |  |
|    |                         | 9  | 11 |      |    |    |             | 1  | 11583                |  | 186         |  |
| 20 | 89                      | 23 | 20 | 269  | 23 | 20 | 0           | 7  | 46332                |  | 744         |  |
|    |                         | 9  | 10 |      |    |    |             | 2  | 11583                |  | 186         |  |
| 30 | 89                      | 32 | 30 | 269  | 32 | 20 | 0           | 5  | 34749                |  | 558         |  |
|    |                         | 9  | 10 |      |    |    |             | 1  | 11583                |  | 186         |  |
| 40 | 89                      | 41 | 40 | 269  | 41 | 40 | 0           | 4  | 23166                |  | 372         |  |
|    |                         | 9  | 10 |      |    |    |             | 2  | 11583                |  | 186         |  |
| 50 | 89                      | 50 | 50 | 269  | 50 | 50 | 0           | 2  | 11583                |  | 186         |  |
|    |                         | 9  | 10 |      |    |    |             | 2  | 11583                |  | 186         |  |
| 30 | 90                      | 0  | 0  | 270  | 0  | 0  | 0           | 0  | 00000                |  | 000         |  |
|    |                         | 9  | 10 |      |    |    |             | 2  |                      |  | 186         |  |



# CANON MEDIATIONVM

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multiplic. | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|-----------------------|------------|
|    | par.                    | /  | // | par. | /  | // | /          | // |                       |            |
| 0  | 90                      | 0  | 0  | 270  | 0  | 0  | 0          | 0  | 00000                 | 00         |
| 10 | 90                      | 9  | 10 | 270  | 9  | 10 | 0          | 2  | 11583                 | 186        |
|    |                         | 9  | 10 |      |    |    |            | 2  | 11583                 | 186        |
| 20 | 90                      | 18 | 20 | 270  | 18 | 20 | 0          | 4  | 23166                 | 372        |
|    |                         | 9  | 10 |      |    |    |            | 1  | 11583                 | 186        |
| 30 | 90                      | 27 | 30 | 270  | 27 | 30 | 0          | 5  | 34749                 | 558        |
|    |                         | 9  | 10 |      |    |    |            | 2  | 11583                 | 186        |
| 40 | 90                      | 36 | 40 | 270  | 36 | 40 | 0          | 7  | 46332                 | 774        |
|    |                         | 9  | 11 |      |    |    |            | 1  | 11583                 | 186        |
| 50 | 90                      | 45 | 51 | 270  | 45 | 51 | 0          | 8  | 57915                 | 930        |
|    |                         | 9  | 10 |      |    |    |            | 2  | 11583                 | 187        |
| I  | 90                      | 55 | 1  | 270  | 55 | 1  | 0          | 10 | 69498                 | 1117       |
|    |                         | 9  | 10 |      |    |    |            | 1  | 11582                 | 186        |
| 10 | 91                      | 4  | 11 | 271  | 4  | 11 | 0          | 11 | 81080                 | 1303       |
|    |                         | 9  | 11 |      |    |    |            | 2  | 11582                 | 186        |
| 20 | 91                      | 13 | 22 | 271  | 13 | 22 | 0          | 13 | 92662                 | 1489       |
|    |                         | 9  | 11 |      |    |    |            | 2  | 11582                 | 186        |
| 30 | 91                      | 22 | 32 | 271  | 22 | 32 | 0          | 15 | 104244                | 1675       |
|    |                         | 9  | 11 |      |    |    |            | 2  | 11581                 | 186        |
| 40 | 91                      | 31 | 43 | 271  | 31 | 43 | 0          | 17 | 115825                | 1861       |
|    |                         | 9  | 10 |      |    |    |            | 1  | 11581                 | 186        |
| 50 | 91                      | 40 | 53 | 271  | 40 | 53 | 0          | 18 | 127406                | 2047       |
|    |                         | 9  | 11 |      |    |    |            | 2  | 11580                 | 186        |
| 2  | 91                      | 50 | 4  | 271  | 50 | 4  | 0          | 20 | 138986                | 2233       |
|    |                         | 9  | 10 |      |    |    |            | 2  | 11579                 | 186        |
| 10 | 91                      | 59 | 14 | 271  | 59 | 14 | 0          | 22 | 150565                | 2419       |
|    |                         | 9  | 11 |      |    |    |            | 1  | 11579                 | 186        |
| 20 | 92                      | 8  | 25 | 272  | 8  | 25 | 0          | 23 | 162144                | 2605       |
|    |                         | 9  | 11 |      |    |    |            | 2  | 11578                 | 186        |
| 30 | 92                      | 17 | 36 | 272  | 17 | 36 | 0          | 25 | 173722                | 2791       |
|    |                         | 9  | 10 |      |    |    |            | 2  | 11578                 | 186        |
| 40 | 92                      | 26 | 46 | 272  | 26 | 46 | 0          | 27 | 185300                | 2977       |
|    |                         | 9  | 11 |      |    |    |            | 1  | 11577                 | 186        |
| 50 | 92                      | 35 | 57 | 272  | 35 | 57 | 0          | 28 | 196877                | 3163       |
|    |                         | 9  | 11 |      |    |    |            | 2  | 11576                 | 186        |
| 3  | 92                      | 45 | 8  | 272  | 45 | 8  | 0          | 30 | 208453                | 3349       |
|    |                         | 9  | 11 |      |    |    |            | 2  | 11575                 | 186        |



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| Radix ascensio-<br>num. |    |         |          |     |    |    | Dña.<br>Ad. |         | Numerus<br>multipli-<br>candus. | Dña.<br>Ad. |
|-------------------------|----|---------|----------|-----|----|----|-------------|---------|---------------------------------|-------------|
| Par                     | /  | //      | Par.     | /   | // | /  | //          |         |                                 |             |
| 3                       | 92 | 45      | 8        | 272 | 45 | 8  | 0           | 30      | 208453                          | 3349        |
| 10                      | 92 | 54<br>9 | 19<br>11 | 272 | 54 | 19 | 0           | 32<br>2 | 220028<br>11574                 | 3535<br>186 |
| 20                      | 93 | 3<br>9  | 30<br>10 | 273 | 3  | 30 | 0           | 34<br>1 | 231602<br>11573                 | 3721<br>186 |
| 30                      | 93 | 12<br>9 | 40<br>11 | 273 | 12 | 40 | 0           | 35<br>2 | 243175<br>11572                 | 3907<br>186 |
| 40                      | 93 | 21<br>9 | 51<br>11 | 273 | 21 | 51 | 0           | 37<br>2 | 254747<br>11571                 | 4093<br>186 |
| 50                      | 93 | 31<br>9 | 2<br>11  | 273 | 31 | 2  | 0           | 39<br>1 | 266318<br>11569                 | 4279<br>186 |
| 4                       | 93 | 40<br>9 | 13<br>11 | 273 | 40 | 13 | 0           | 40<br>1 | 277887<br>11568                 | 4465<br>186 |
| 10                      | 93 | 49<br>9 | 24<br>11 | 273 | 49 | 24 | 0           | 41<br>2 | 289455<br>11567                 | 4651<br>186 |
| 20                      | 93 | 58<br>9 | 35<br>11 | 273 | 58 | 35 | 0           | 43<br>2 | 301022<br>11566                 | 4837<br>186 |
| 30                      | 94 | 7<br>9  | 46<br>11 | 274 | 7  | 46 | 0           | 45<br>1 | 312588<br>11564                 | 5023<br>187 |
| 40                      | 94 | 16<br>9 | 57<br>11 | 274 | 16 | 57 | 0           | 46<br>2 | 324152<br>11563                 | 5210<br>187 |
| 50                      | 94 | 26<br>9 | 8<br>11  | 274 | 26 | 8  | 0           | 48<br>1 | 335715<br>11561                 | 5396<br>186 |
| 5                       | 94 | 35<br>9 | 19<br>11 | 274 | 35 | 19 | 0           | 49<br>2 | 347276<br>11560                 | 5582<br>186 |
| 10                      | 94 | 44<br>9 | 30<br>11 | 274 | 44 | 30 | 0           | 51<br>2 | 358836<br>11558                 | 5768<br>187 |
| 20                      | 94 | 53<br>9 | 41<br>11 | 274 | 53 | 41 | 0           | 53<br>1 | 370394<br>11557                 | 5955<br>186 |
| 30                      | 95 | 2<br>9  | 52<br>11 | 275 | 2  | 52 | 0           | 54<br>2 | 381951<br>11555                 | 6141<br>186 |
| 40                      | 95 | 12<br>9 | 3<br>11  | 275 | 12 | 3  | 0           | 56<br>1 | 393506<br>11553                 | 6327<br>187 |
| 50                      | 95 | 21<br>9 | 14<br>11 | 275 | 21 | 14 | 0           | 57<br>2 | 405059<br>11551                 | 6514<br>186 |
| 6                       | 95 | 30<br>9 | 25<br>11 | 275 | 30 | 25 | 0           | 59<br>2 | 416610<br>11549                 | 6700<br>186 |



# CANON MEDIATIONVM

6 7

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli-<br>candus. | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|---------------------------------|------------|
|    | par.                    | /  | // | par. | /  | // | /          | // |                                 |            |
| 6  | 95                      | 30 | 25 | 275  | 30 | 25 | 0          | 59 | 416610                          | 6700       |
| 10 | 95                      | 39 | 36 | 275  | 39 | 36 | 1          | 1  | 428159                          | 6886       |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11547                           | 187        |
| 20 | 95                      | 48 | 48 | 275  | 48 | 48 | 1          | 3  | 439706                          | 7073       |
|    |                         | 9  | 11 |      |    |    |            | 2  | 11545                           | 186        |
| 30 | 95                      | 57 | 59 | 275  | 57 | 59 | 1          | 5  | 451251                          | 7259       |
|    |                         | 9  | 12 |      |    |    |            | 1  | 11543                           | 186        |
| 40 | 96                      | 7  | 11 | 276  | 7  | 11 | 1          | 6  | 462794                          | 7445       |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11541                           | 187        |
| 50 | 96                      | 16 | 23 | 276  | 16 | 23 | 1          | 8  | 474335                          | 7632       |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11539                           | 187        |
| 7  | 96                      | 25 | 35 | 276  | 25 | 35 | 1          | 10 | 485874                          | 7819       |
|    |                         | 9  | 11 |      |    |    |            | 1  | 11537                           | 186        |
| 10 | 96                      | 34 | 46 | 276  | 34 | 46 | 1          | 11 | 497411                          | 8005       |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11534                           | 187        |
| 20 | 96                      | 43 | 58 | 276  | 43 | 58 | 1          | 13 | 508945                          | 8192       |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11532                           | 187        |
| 30 | 96                      | 53 | 10 | 276  | 53 | 10 | 1          | 15 | 520477                          | 8379       |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11530                           | 187        |
| 40 | 97                      | 2  | 22 | 277  | 2  | 22 | 1          | 17 | 532007                          | 8566       |
|    |                         | 9  | 12 |      |    |    |            | 1  | 11528                           | 187        |
| 50 | 97                      | 11 | 34 | 277  | 11 | 34 | 1          | 18 | 543535                          | 8753       |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11526                           | 187        |
| 8  | 97                      | 20 | 46 | 277  | 20 | 46 | 1          | 20 | 555061                          | 8940       |
|    |                         | 9  | 12 |      |    |    |            | 1  | 11524                           | 187        |
| 10 | 97                      | 29 | 58 | 277  | 29 | 58 | 1          | 21 | 566585                          | 9127       |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11521                           | 187        |
| 20 | 97                      | 39 | 10 | 277  | 39 | 70 | 1          | 23 | 578106                          | 9314       |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11518                           | 187        |
| 30 | 97                      | 48 | 22 | 277  | 48 | 22 | 1          | 25 | 589624                          | 9501       |
|    |                         | 9  | 13 |      |    |    |            | 2  | 11515                           | 187        |
| 40 | 97                      | 57 | 35 | 277  | 57 | 35 | 1          | 27 | 601139                          | 9688       |
|    |                         | 9  | 12 |      |    |    |            | 1  | 11512                           | 187        |
| 50 | 98                      | 6  | 47 | 278  | 6  | 47 | 1          | 28 | 612651                          | 9875       |
|    |                         | 9  | 13 |      |    |    |            | 2  | 11509                           | 187        |
| 9  | 98                      | 16 | 0  | 278  | 16 | 0  | 1          | 30 | 624160                          | 10062      |
|    |                         | 9  | 12 |      |    |    |            | 2  | 11506                           | 187        |



5 b

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli- | Dra<br>Ad.   |
|----|-------------------------|----|----|------|----|----|------------|----|----------------------|--------------|
|    | par                     | /  | // | par. | /  | // | /          | // |                      |              |
| 9  | 98                      | 16 | 0  | 278  | 16 | 0  | 1          | 30 | 624:60               | 10062        |
| 10 | 98                      | 25 | 12 | 278  | 25 | 12 | 1          | 32 | 635666<br>11503      | 10249<br>187 |
| 20 | 98                      | 34 | 24 | 278  | 34 | 24 | 1          | 33 | 647169<br>11500      | 10436<br>187 |
| 30 | 98                      | 43 | 37 | 278  | 43 | 37 | 1          | 35 | 658669<br>11497      | 10623<br>187 |
| 40 | 98                      | 52 | 50 | 278  | 52 | 50 | 1          | 37 | 670166<br>11494      | 10810<br>187 |
| 50 | 99                      | 2  | 3  | 279  | 2  | 3  | 1          | 38 | 681660<br>11491      | 10997<br>188 |
| 10 | 99                      | 11 | 16 | 279  | 11 | 16 | 1          | 40 | 693151<br>11488      | 11185<br>187 |
| 10 | 99                      | 20 | 29 | 279  | 20 | 29 | 1          | 41 | 704639<br>11485      | 11372<br>187 |
| 20 | 99                      | 29 | 42 | 279  | 29 | 42 | 1          | 43 | 716124<br>11482      | 11559<br>187 |
| 30 | 99                      | 38 | 55 | 279  | 38 | 55 | 1          | 44 | 727606<br>11409      | 11746<br>187 |
| 40 | 99                      | 48 | 9  | 279  | 48 | 9  | 1          | 46 | 739085<br>11475      | 11933<br>188 |
| 50 | 99                      | 57 | 22 | 279  | 57 | 22 | 1          | 47 | 750560<br>11472      | 1212<br>188  |
| 11 | 100                     | 6  | 36 | 280  | 6  | 36 | 1          | 49 | 762032<br>11469      | 12309<br>187 |
| 10 | 100                     | 15 | 49 | 280  | 15 | 49 | 1          | 50 | 773401<br>11465      | 12496<br>188 |
| 20 | 100                     | 25 | 3  | 280  | 25 | 3  | 1          | 52 | 784966<br>11459      | 12684<br>187 |
| 30 | 100                     | 34 | 17 | 280  | 34 | 17 | 1          | 53 | 796427<br>11448      | 12871<br>188 |
| 40 | 100                     | 43 | 31 | 280  | 43 | 31 | 1          | 55 | 807885<br>11454      | 1309<br>188  |
| 50 | 100                     | 52 | 45 | 280  | 52 | 45 | 1          | 56 | 819339<br>11450      | 13247<br>188 |
| 12 | 101                     | 1  | 59 | 281  | 1  | 59 | 1          | 58 | 830789<br>11446      | 13435<br>187 |



# CANON MEDIATIONVM

| <div> <div>5</div> <div>6</div> </div> |     |    |    |      |    |    |            |    |                      |  |            |  |  |
|----------------------------------------|-----|----|----|------|----|----|------------|----|----------------------|--|------------|--|--|
| Radix ascensio-<br>num.                |     |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli- |  | Dra<br>Ad. |  |  |
|                                        |     |    |    |      |    |    |            |    | candus.              |  |            |  |  |
|                                        | par | /  | // | par. | /  | // | /          | // |                      |  |            |  |  |
| <b>12</b>                              | 101 | 1  | 59 | 281  | 1  | 59 | 1          | 58 | 830789               |  | 13435      |  |  |
| 10                                     | 101 | 11 | 13 | 281  | 11 | 13 | 1          | 59 | 842235               |  | 13622      |  |  |
|                                        |     | 9  | 14 |      |    |    |            | 2  | 11442                |  | 188        |  |  |
| 20                                     | 101 | 20 | 27 | 281  | 20 | 27 | 2          | 1  | 853677               |  | 13810      |  |  |
|                                        |     | 9  | 14 |      |    |    |            | 1  | 11438                |  | 188        |  |  |
| 30                                     | 101 | 29 | 41 | 281  | 29 | 41 | 2          | 2  | 865115               |  | 13998      |  |  |
|                                        |     | 9  | 15 |      |    |    |            | 2  | 11434                |  | 188        |  |  |
| 40                                     | 101 | 38 | 56 | 281  | 38 | 56 | 2          | 4  | 876549               |  | 14186      |  |  |
|                                        |     | 9  | 15 |      |    |    |            | 1  | 11430                |  | 188        |  |  |
| 50                                     | 101 | 48 | 11 | 281  | 48 | 11 | 2          | 5  | 887979               |  | 14374      |  |  |
|                                        |     | 9  | 15 |      |    |    |            | 2  | 11426                |  | 188        |  |  |
| <b>13</b>                              | 101 | 57 | 26 | 281  | 57 | 26 | 2          | 7  | 899405               |  | 14562      |  |  |
|                                        |     | 9  | 15 |      |    |    |            | 2  | 11422                |  | 188        |  |  |
| 10                                     | 102 | 6  | 41 | 282  | 6  | 41 | 2          | 9  | 910827               |  | 14750      |  |  |
|                                        |     | 9  | 15 |      |    |    |            | 1  | 11417                |  | 188        |  |  |
| 20                                     | 102 | 15 | 56 | 282  | 15 | 56 | 2          | 10 | 922244               |  | 14938      |  |  |
|                                        |     | 9  | 15 |      |    |    |            | 2  | 11413                |  | 188        |  |  |
| 30                                     | 102 | 25 | 11 | 282  | 25 | 11 | 2          | 12 | 933657               |  | 15126      |  |  |
|                                        |     | 9  | 15 |      |    |    |            | 2  | 11409                |  | 188        |  |  |
| 40                                     | 102 | 34 | 26 | 282  | 34 | 26 | 2          | 14 | 945066               |  | 15314      |  |  |
|                                        |     | 9  | 15 |      |    |    |            | 1  | 11404                |  | 188        |  |  |
| 50                                     | 102 | 43 | 41 | 282  | 43 | 41 | 2          | 15 | 956470               |  | 15502      |  |  |
|                                        |     | 9  | 15 |      |    |    |            | 2  | 11400                |  | 189        |  |  |
| <b>14</b>                              | 102 | 52 | 56 | 282  | 52 | 56 | 2          | 17 | 967870               |  | 15691      |  |  |
|                                        |     | 9  | 16 |      |    |    |            | 2  | 11396                |  | 188        |  |  |
| 10                                     | 103 | 2  | 13 | 283  | 2  | 13 | 2          | 19 | 979266               |  | 15879      |  |  |
|                                        |     | 9  | 16 |      |    |    |            | 1  | 11391                |  | 188        |  |  |
| 20                                     | 103 | 11 | 29 | 283  | 11 | 29 | 2          | 20 | 990657               |  | 16067      |  |  |
|                                        |     | 9  | 16 |      |    |    |            | 2  | 11387                |  | 188        |  |  |
| 30                                     | 103 | 20 | 45 | 283  | 20 | 45 | 2          | 22 | 1002044              |  | 16255      |  |  |
|                                        |     | 9  | 16 |      |    |    |            | 2  | 11382                |  | 189        |  |  |
| 40                                     | 103 | 30 | 11 | 283  | 30 | 11 | 2          | 24 | 1013426              |  | 16444      |  |  |
|                                        |     | 9  | 16 |      |    |    |            | 1  | 11377                |  | 188        |  |  |
| 50                                     | 103 | 39 | 17 | 283  | 39 | 17 | 2          | 25 | 1024803              |  | 16632      |  |  |
|                                        |     | 9  | 16 |      |    |    |            | 2  | 11373                |  | 189        |  |  |
| <b>15</b>                              | 103 | 48 | 33 | 283  | 48 | 33 | 2          | 27 | 1036175              |  | 16821      |  |  |
|                                        |     | 9  | 16 |      |    |    |            | 2  | 11367                |  | 188        |  |  |



|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli-<br>candus. | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|---------------------------------|------------|
|    | par.                    | /  | // | par. | /  | // | /          | // |                                 |            |
| 15 | 103                     | 48 | 33 | 283  | 48 | 33 | 2          | 27 | 1036175                         | 16821      |
| 10 | 103                     | 57 | 49 | 283  | 57 | 49 | 2          | 29 | 1047542                         | 17009      |
|    |                         | 9  | 16 |      |    |    |            | 1  | 11362                           | 187        |
| 20 | 104                     | 7  | 5  | 284  | 7  | 5  | 2          | 30 | 1058904                         | 17197      |
|    |                         | 9  | 17 |      |    |    |            | 2  | 11357                           | 189        |
| 30 | 104                     | 16 | 22 | 284  | 16 | 22 | 2          | 32 | 1070261                         | 17386      |
|    |                         | 9  | 17 |      |    |    |            | 1  | 11352                           | 189        |
| 40 | 104                     | 25 | 39 | 284  | 25 | 39 | 2          | 33 | 1081613                         | 17575      |
|    |                         | 9  | 17 |      |    |    |            | 2  | 11347                           | 189        |
| 50 | 104                     | 34 | 56 | 284  | 34 | 56 | 2          | 35 | 1092960                         | 17764      |
|    |                         | 9  | 17 |      |    |    |            | 1  | 11342                           | 189        |
| 16 | 104                     | 44 | 13 | 284  | 44 | 13 | 2          | 36 | 1104302                         | 17953      |
|    |                         | 9  | 17 |      |    |    |            | 1  | 11337                           | 189        |
| 10 | 104                     | 53 | 30 | 285  | 53 | 30 | 2          | 37 | 1115639                         | 18142      |
|    |                         | 9  | 17 |      |    |    |            | 2  | 11331                           | 189        |
| 20 | 105                     | 2  | 47 | 285  | 2  | 47 | 2          | 39 | 1126970                         | 18331      |
|    |                         | 9  | 17 |      |    |    |            | 1  | 11326                           | 189        |
| 30 | 105                     | 12 | 4  | 285  | 12 | 4  | 2          | 40 | 1138296                         | 18520      |
|    |                         | 9  | 18 |      |    |    |            | 2  | 11321                           | 189        |
| 40 | 105                     | 21 | 22 | 285  | 21 | 22 | 2          | 42 | 1149617                         | 18709      |
|    |                         | 9  | 18 |      |    |    |            | 1  | 11316                           | 189        |
| 50 | 105                     | 30 | 40 | 285  | 30 | 40 | 2          | 43 | 1160933                         | 18898      |
|    |                         | 9  | 18 |      |    |    |            | 2  | 11310                           | 189        |
| 17 | 105                     | 39 | 58 | 285  | 39 | 58 | 2          | 45 | 1172243                         | 19087      |
|    |                         | 9  | 18 |      |    |    |            | 1  | 11304                           | 189        |
| 10 | 105                     | 49 | 16 | 285  | 49 | 16 | 2          | 46 | 1183547                         | 19276      |
|    |                         | 9  | 18 |      |    |    |            | 2  | 11298                           | 189        |
| 20 | 105                     | 58 | 34 | 285  | 58 | 34 | 2          | 48 | 1194845                         | 19465      |
|    |                         | 9  | 18 |      |    |    |            | 1  | 11292                           | 189        |
| 30 | 106                     | 7  | 52 | 286  | 7  | 52 | 2          | 49 | 1206137                         | 19654      |
|    |                         | 9  | 18 |      |    |    |            | 1  | 11286                           | 190        |
| 40 | 106                     | 17 | 10 | 286  | 17 | 10 | 2          | 50 | 1217423                         | 19844      |
|    |                         | 9  | 19 |      |    |    |            | 1  | 11280                           | 189        |
| 50 | 106                     | 26 | 39 | 286  | 26 | 39 | 2          | 51 | 1228703                         | 20033      |
|    |                         | 9  | 19 |      |    |    |            | 2  | 11274                           | 190        |
| 18 | 106                     | 35 | 48 | 286  | 35 | 48 | 2          | 53 | 1239977                         | 20223      |
|    |                         | 9  | 19 |      |    |    |            |    |                                 | 189        |



# CANON MEDIATIONVM

| <div> <div>5</div> <div>6</div> </div> |     |               |      |               |    |            |         |                       |    |            |     |
|----------------------------------------|-----|---------------|------|---------------|----|------------|---------|-----------------------|----|------------|-----|
| Radix ascensio <sup>s</sup><br>num.    |     |               |      |               |    | Dra<br>Ad. |         | Numerus<br>multiplic. |    | Dra<br>Ad. |     |
| par.                                   | /   | //            | par. | /             | // | /          | //      | /                     | // |            |     |
| 18                                     | 106 | 35 48         | 286  | 35 48         |    | 2          | 53      | 1239977               |    | 20223      |     |
| 10                                     | 106 | 45 7<br>9 19  | 286  | 45 7<br>9 19  |    | 2          | 54<br>2 | 1251245<br>11262      |    | 20412      | 190 |
| 20                                     | 106 | 54 26<br>9 19 | 286  | 54 26<br>9 19 |    | 2          | 56<br>1 | 1262507<br>11256      |    | 20602      | 189 |
| 30                                     | 107 | 3 45<br>9 19  | 287  | 3 45<br>9 19  |    | 2          | 57<br>1 | 1273763<br>11240      |    | 20791      | 190 |
| 40                                     | 107 | 13 4<br>9 19  | 287  | 13 4<br>9 19  |    | 2          | 58<br>1 | 1285013<br>11244      |    | 20981      | 190 |
| 50                                     | 107 | 22 23<br>9 29 | 287  | 22 23<br>9 29 |    | 2          | 59<br>2 | 1296257<br>11238      |    | 21171      | 190 |
| 19                                     | 107 | 31 43<br>9 20 | 287  | 31 43<br>9 20 |    | 3          | 1<br>1  | 1307495<br>11231      |    | 21361      | 190 |
| 10                                     | 107 | 41 3<br>9 20  | 287  | 41 3<br>9 20  |    | 3          | 2<br>2  | 1318726<br>11225      |    | 21551      | 190 |
| 20                                     | 107 | 50 23<br>9 20 | 287  | 50 23<br>9 20 |    | 3          | 4<br>1  | 1329951<br>11218      |    | 21741      | 190 |
| 30                                     | 107 | 59 43<br>9 20 | 287  | 59 43<br>9 20 |    | 3          | 5<br>1  | 1341169<br>11212      |    | 21931      | 190 |
| 40                                     | 108 | 9 3<br>9 21   | 288  | 9 3<br>9 21   |    | 3          | 6<br>1  | 1352381<br>11205      |    | 22121      | 190 |
| 50                                     | 108 | 18 24<br>9 21 | 288  | 18 24<br>9 21 |    | 3          | 7<br>2  | 1363586<br>11199      |    | 22311      | 190 |
| 20                                     | 108 | 27 45<br>9 21 | 288  | 27 45<br>9 21 |    | 3          | 9<br>1  | 1374785<br>11192      |    | 22501      | 190 |
| 10                                     | 108 | 37 6<br>9 21  | 288  | 37 6<br>9 21  |    | 3          | 10<br>2 | 1385977<br>11185      |    | 22691      | 190 |
| 20                                     | 108 | 46 27<br>9 21 | 288  | 46 27<br>9 21 |    | 3          | 12<br>1 | 1397162<br>11178      |    | 22881      | 191 |
| 30                                     | 108 | 55 48<br>9 21 | 288  | 55 48<br>9 21 |    | 3          | 13<br>1 | 1408340<br>11171      |    | 23071      | 190 |
| 40                                     | 109 | 5 9<br>9 21   | 289  | 5 9<br>9 21   |    | 3          | 14<br>1 | 1419511<br>11164      |    | 23262      | 190 |
| 50                                     | 109 | 14 30<br>9 22 | 289  | 14 30<br>9 22 |    | 3          | 15<br>2 | 1430675<br>11157      |    | 23452      | 191 |
| 21                                     | 109 | 23 52<br>9 22 | 289  | 23 52<br>9 22 |    | 3          | 17<br>1 | 1441832<br>11149      |    | 23643      | 191 |



| <div> <div> <div>5</div> <div>6</div> </div> </div> |     |    |      |     |    |             |    |                      |         |             |  |
|-----------------------------------------------------|-----|----|------|-----|----|-------------|----|----------------------|---------|-------------|--|
| Radix ascensio-<br>num.                             |     |    |      |     |    | Dra.<br>Ad. |    | Numerus<br>multipli- |         | Dra.<br>Ad. |  |
| Par                                                 | /   | // | Par. | /   | // | /           | // | candus.              |         |             |  |
| 21                                                  | 109 | 23 | 52   | 289 | 23 | 52          | 3  | 17                   | 1441832 | 23643       |  |
| 10                                                  | 109 | 33 | 14   | 289 | 33 | 14          | 3  | 18                   | 1452981 | 23834       |  |
|                                                     |     | 9  | 22   |     |    |             |    | 2                    | 11142   | 190         |  |
| 20                                                  | 109 | 42 | 36   | 289 | 42 | 36          | 3  | 20                   | 1464123 | 24024       |  |
|                                                     |     | 9  | 22   |     |    |             |    | 1                    | 11135   | 191         |  |
| 30                                                  | 109 | 51 | 58   | 289 | 51 | 58          | 3  | 21                   | 1475258 | 24215       |  |
|                                                     |     | 9  | 23   |     |    |             |    | 1                    | 11127   | 190         |  |
| 40                                                  | 110 | 1  | 21   | 290 | 1  | 21          | 3  | 22                   | 1486385 | 24405       |  |
|                                                     |     | 9  | 23   |     |    |             |    | 1                    | 11120   | 191         |  |
| 50                                                  | 110 | 10 | 44   | 290 | 10 | 44          | 3  | 23                   | 1497505 | 24596       |  |
|                                                     |     | 9  | 23   |     |    |             |    | 2                    | 11113   | 191         |  |
| 22                                                  | 110 | 20 | 7    | 290 | 20 | 7           | 3  | 25                   | 1508618 | 24787       |  |
|                                                     |     | 9  | 23   |     |    |             |    | 1                    | 11105   | 191         |  |
| 10                                                  | 110 | 29 | 30   | 290 | 29 | 30          | 3  | 26                   | 1519723 | 24978       |  |
|                                                     |     | 9  | 23   |     |    |             |    | 2                    | 11098   | 191         |  |
| 20                                                  | 110 | 38 | 53   | 290 | 38 | 53          | 3  | 28                   | 1530821 | 25169       |  |
|                                                     |     | 9  | 23   |     |    |             |    | 1                    | 11090   | 191         |  |
| 30                                                  | 110 | 48 | 16   | 290 | 48 | 16          | 3  | 29                   | 1541911 | 25360       |  |
|                                                     |     | 9  | 24   |     |    |             |    | 1                    | 11082   | 191         |  |
| 40                                                  | 110 | 57 | 40   | 290 | 57 | 40          | 3  | 30                   | 1552993 | 25551       |  |
|                                                     |     | 9  | 24   |     |    |             |    | 1                    | 11074   | 191         |  |
| 50                                                  | 111 | 7  | 4    | 291 | 7  | 4           | 3  | 31                   | 1564067 | 25742       |  |
|                                                     |     | 9  | 24   |     |    |             |    | 2                    | 11066   | 191         |  |
| 23                                                  | 111 | 16 | 28   | 291 | 16 | 28          | 3  | 33                   | 1575133 | 25933       |  |
|                                                     |     | 9  | 24   |     |    |             |    | 1                    | 11058   | 191         |  |
| 10                                                  | 111 | 25 | 52   | 291 | 25 | 52          | 3  | 34                   | 1586191 | 26124       |  |
|                                                     |     | 9  | 24   |     |    |             |    | 1                    | 11050   | 192         |  |
| 20                                                  | 111 | 35 | 16   | 291 | 35 | 16          | 3  | 35                   | 1597241 | 26316       |  |
|                                                     |     | 9  | 24   |     |    |             |    | 1                    | 11042   | 191         |  |
| 30                                                  | 111 | 44 | 40   | 291 | 44 | 40          | 3  | 36                   | 1608283 | 26507       |  |
|                                                     |     | 9  | 25   |     |    |             |    | 2                    | 11034   | 191         |  |
| 40                                                  | 111 | 54 | 5    | 291 | 54 | 5           | 3  | 38                   | 1619317 | 26698       |  |
|                                                     |     | 9  | 25   |     |    |             |    | 1                    | 11026   | 192         |  |
| 50                                                  | 112 | 3  | 30   | 292 | 3  | 30          | 3  | 39                   | 1630343 | 26890       |  |
|                                                     |     | 9  | 25   |     |    |             |    | 1                    | 11018   | 191         |  |
| 24                                                  | 112 | 12 | 55   | 292 | 12 | 55          | 3  | 40                   | 1641361 | 27081       |  |
|                                                     |     | 9  | 25   |     |    |             |    | 2                    | 11009   | 192         |  |



# CANON MEDIATIONVM

|           | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multiplic. | Dra<br>Ad. |
|-----------|-------------------------|----|----|------|----|----|------------|----|-----------------------|------------|
|           | par.                    | /  | // | par. | /  | // | /          | // |                       |            |
| <b>24</b> | 112                     | 12 | 55 | 292  | 12 | 55 | 3          | 40 | 1641361               | 2708       |
| 10        | 112                     | 22 | 20 | 292  | 22 | 20 | 3          | 42 | 1652370               | 27273      |
|           |                         | 9  | 26 |      |    |    |            | 1  | 11000                 | 191        |
| 20        | 112                     | 31 | 46 | 292  | 31 | 46 | 3          | 43 | 1663370               | 27464      |
|           |                         | 9  | 26 |      |    |    |            | 1  | 10992                 | 192        |
| 30        | 112                     | 41 | 12 | 292  | 41 | 12 | 3          | 44 | 1674362               | 27656      |
|           |                         | 9  | 26 |      |    |    |            | 1  | 10983                 | 192        |
| 40        | 112                     | 50 | 38 | 292  | 50 | 38 | 3          | 45 | 1685345               | 27848      |
|           |                         | 9  | 26 |      |    |    |            | 1  | 10974                 | 191        |
| 50        | 113                     | 0  | 4  | 293  | 0  | 4  | 3          | 46 | 1696319               | 28039      |
|           |                         | 9  | 26 |      |    |    |            | 2  | 10965                 | 192        |
| <b>25</b> | 113                     | 9  | 30 | 293  | 9  | 30 | 3          | 48 | 1707284               | 28231      |
|           |                         | 9  | 26 |      |    |    |            | 1  | 10956                 | 192        |
| 10        | 113                     | 18 | 56 | 293  | 18 | 56 | 3          | 49 | 1718240               | 28423      |
|           |                         | 9  | 27 |      |    |    |            | 1  | 10947                 | 192        |
| 20        | 113                     | 28 | 23 | 293  | 28 | 23 | 3          | 50 | 1729187               | 28615      |
|           |                         | 9  | 27 |      |    |    |            | 1  | 10938                 | 192        |
| 30        | 113                     | 37 | 50 | 293  | 37 | 50 | 3          | 51 | 1740125               | 28807      |
|           |                         | 9  | 27 |      |    |    |            | 1  | 10928                 | 192        |
| 40        | 113                     | 47 | 17 | 293  | 47 | 17 | 3          | 52 | 1751053               | 28999      |
|           |                         | 9  | 27 |      |    |    |            | 2  | 10919                 | 192        |
| 50        | 113                     | 56 | 44 | 293  | 56 | 44 | 3          | 54 | 1761972               | 29191      |
|           |                         | 9  | 28 |      |    |    |            | 1  | 10910                 | 192        |
| <b>26</b> | 114                     | 6  | 12 | 294  | 6  | 12 | 3          | 55 | 1772882               | 29383      |
|           |                         | 9  | 28 |      |    |    |            | 1  | 10901                 | 192        |
| 10        | 114                     | 15 | 40 | 294  | 15 | 40 | 3          | 56 | 1783783               | 29575      |
|           |                         | 9  | 28 |      |    |    |            | 1  | 10891                 | 192        |
| 20        | 114                     | 25 | 8  | 294  | 25 | 8  | 3          | 57 | 1794674               | 29767      |
|           |                         | 9  | 28 |      |    |    |            | 1  | 10882                 | 192        |
| 30        | 114                     | 34 | 36 | 294  | 34 | 36 | 3          | 58 | 1805556               | 29959      |
|           |                         | 9  | 28 |      |    |    |            | 1  | 10873                 | 192        |
| 40        | 114                     | 44 | 4  | 294  | 44 | 4  | 3          | 59 | 1816429               | 30151      |
|           |                         | 9  | 29 |      |    |    |            | 2  | 10862                 | 192        |
| 50        | 114                     | 53 | 33 | 294  | 53 | 33 | 4          | 1  | 1827292               | 30343      |
|           |                         | 9  | 20 |      |    |    |            | 1  | 10854                 | 192        |
| <b>27</b> | 115                     | 3  | 2  | 295  | 3  | 2  | 4          | 2  | 1838146               | 30536      |
|           |                         | 9  | 29 |      |    |    |            | 1  | 10844                 | 192        |



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| Radix ascensio- |     |    |      |     |    |    |    |         |         | Dña.<br>Ad. | Numerus<br>multipli- | Dña.<br>Ad. |
|-----------------|-----|----|------|-----|----|----|----|---------|---------|-------------|----------------------|-------------|
| num.            |     |    |      |     |    |    |    |         |         |             |                      |             |
| Par             | /   | // | Par. | /   | // | /  | // | candus. |         |             |                      |             |
| 27              | 115 | 3  | 2    | 295 | 3  | 2  | 4  | 2       | 1838146 | 30536       |                      |             |
| 10              | 115 | 12 | 31   | 295 | 12 | 31 | 4  | 3       | 1848990 | 30728       |                      |             |
|                 |     | 9  | 30   |     |    |    |    | 2       | 10834   | 192         |                      |             |
| 20              | 115 | 22 | 1    | 295 | 22 | 1  | 4  | 5       | 1859824 | 30920       |                      |             |
|                 |     | 9  | 30   |     |    |    |    | 1       | 10824   | 193         |                      |             |
| 30              | 115 | 31 | 31   | 295 | 31 | 31 | 4  | 6       | 1870648 | 31113       |                      |             |
|                 |     | 9  | 30   |     |    |    |    | 1       | 10814   | 192         |                      |             |
| 40              | 115 | 41 | 1    | 295 | 41 | 1  | 4  | 7       | 1881462 | 31305       |                      |             |
|                 |     | 9  | 30   |     |    |    |    | 1       | 10804   | 193         |                      |             |
| 50              | 115 | 50 | 31   | 295 | 50 | 31 | 4  | 8       | 1892266 | 31498       |                      |             |
|                 |     | 9  | 30   |     |    |    |    | 1       | 10794   | 193         |                      |             |
| 28              | 116 | 0  | 1    | 296 | 0  | 1  | 4  | 9       | 1903060 | 31691       |                      |             |
|                 |     | 9  | 30   |     |    |    |    | 1       | 10783   | 192         |                      |             |
| 10              | 116 | 9  | 31   | 296 | 9  | 31 | 4  | 10      | 1913843 | 31883       |                      |             |
|                 |     | 9  | 31   |     |    |    |    | 1       | 10773   | 193         |                      |             |
| 20              | 119 | 19 | 2    | 296 | 19 | 2  | 4  | 11      | 1924616 | 32076       |                      |             |
|                 |     | 9  | 31   |     |    |    |    | 1       | 10762   | 192         |                      |             |
| 30              | 116 | 28 | 33   | 296 | 28 | 33 | 4  | 12      | 1935378 | 32268       |                      |             |
|                 |     | 9  | 31   |     |    |    |    | 1       | 10752   | 193         |                      |             |
| 40              | 116 | 38 | 4    | 296 | 38 | 4  | 4  | 13      | 1946130 | 30491       |                      |             |
|                 |     | 9  | 31   |     |    |    |    | 1       | 10742   | 193         |                      |             |
| 50              | 116 | 47 | 35   | 296 | 47 | 35 | 4  | 14      | 1956872 | 32654       |                      |             |
|                 |     | 9  | 31   |     |    |    |    | 1       | 10731   | 193         |                      |             |
| 29              | 116 | 57 | 6    | 296 | 57 | 6  | 4  | 15      | 1967603 | 32847       |                      |             |
|                 |     | 9  | 32   |     |    |    |    | 1       | 10720   | 192         |                      |             |
| 10              | 117 | 6  | 38   | 297 | 6  | 38 | 4  | 16      | 1978323 | 33039       |                      |             |
|                 |     | 9  | 32   |     |    |    |    | 1       | 10709   | 193         |                      |             |
| 20              | 117 | 16 | 20   | 297 | 16 | 10 | 4  | 17      | 1989032 | 33232       |                      |             |
|                 |     | 9  | 32   |     |    |    |    | 1       | 10698   | 193         |                      |             |
| 30              | 117 | 25 | 42   | 297 | 25 | 42 | 4  | 18      | 1999730 | 33425       |                      |             |
|                 |     | 9  | 33   |     |    |    |    | 1       | 10687   | 193         |                      |             |
| 40              | 117 | 35 | 15   | 297 | 35 | 15 | 4  | 19      | 2010417 | 33618       |                      |             |
|                 |     | 9  | 33   |     |    |    |    | 1       | 10676   | 193         |                      |             |
| 50              | 117 | 44 | 48   | 297 | 44 | 48 | 4  | 20      | 2021093 | 33811       |                      |             |
|                 |     | 9  | 33   |     |    |    |    | 1       | 10665   | 193         |                      |             |
| 30              | 117 | 54 | 21   | 297 | 54 | 21 | 4  | 21      | 2031758 | 34004       |                      |             |
|                 |     | 9  | 33   |     |    |    |    | 1       | 10653   | 193         |                      |             |



# C A N O N M E D I A T I O N V M

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli-<br>candus. | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|---------------------------------|------------|
|    | par.                    | /  | // | par. | /  | // | /          | // |                                 |            |
| O  | 117                     | 54 | 21 | 297  | 54 | 21 | 4          | 21 | 2031758                         | 34004      |
| 10 | 118                     | 3  | 54 | 298  | 3  | 54 | 4          | 22 | 2042411                         | 34197      |
|    |                         | 9  | 33 |      |    |    |            | 1  | 10642                           | 193        |
| 20 | 118                     | 13 | 27 | 298  | 13 | 27 | 4          | 23 | 2053053                         | 34390      |
|    |                         | 9  | 34 |      |    |    |            | 1  | 10630                           | 193        |
| 30 | 118                     | 23 | 1  | 298  | 23 | 1  | 4          | 24 | 2063683                         | 34583      |
|    |                         | 9  | 34 |      |    |    |            | 1  | 10619                           | 193        |
| 40 | 118                     | 33 | 35 | 298  | 32 | 35 | 4          | 25 | 2074302                         | 34776      |
|    |                         | 9  | 34 |      |    |    |            | 1  | 10608                           | 193        |
| 50 | 118                     | 42 | 9  | 298  | 42 | 9  | 4          | 26 | 2084910                         | 34969      |
|    |                         | 9  | 34 |      |    |    |            | 1  | 10596                           | 193        |
| I  | 118                     | 51 | 44 | 298  | 51 | 44 | 4          | 27 | 2095506                         | 35162      |
|    |                         | 9  | 35 |      |    |    |            | 1  | 10584                           | 193        |
| 10 | 119                     | 1  | 19 | 299  | 1  | 19 | 4          | 28 | 2106090                         | 35355      |
|    |                         | 9  | 35 |      |    |    |            | 1  | 10573                           | 193        |
| 20 | 119                     | 10 | 54 | 299  | 10 | 54 | 4          | 29 | 2116603                         | 35548      |
|    |                         | 9  | 35 |      |    |    |            | 1  | 10561                           | 193        |
| 30 | 119                     | 20 | 29 | 299  | 20 | 29 | 4          | 30 | 2127224                         | 35741      |
|    |                         | 9  | 36 |      |    |    |            | 1  | 10549                           | 193        |
| 40 | 119                     | 30 | 5  | 299  | 30 | 5  | 4          | 31 | 2137773                         | 35934      |
|    |                         | 9  | 36 |      |    |    |            | 1  | 10537                           | 194        |
| 50 | 119                     | 39 | 41 | 299  | 39 | 41 | 4          | 32 | 2148310                         | 36128      |
|    |                         | 9  | 36 |      |    |    |            | 1  | 10524                           | 193        |
| 2  | 119                     | 49 | 17 | 299  | 49 | 17 | 4          | 33 | 2158834                         | 36321      |
|    |                         | 9  | 36 |      |    |    |            | 1  | 10512                           | 193        |
| 10 | 119                     | 58 | 53 | 299  | 58 | 53 | 4          | 34 | 2169346                         | 36514      |
|    |                         | 9  | 36 |      |    |    |            | 1  | 10500                           | 194        |
| 20 | 120                     | 8  | 29 | 300  | 8  | 29 | 4          | 35 | 2179846                         | 36708      |
|    |                         | 9  | 37 |      |    |    |            | 1  | 10488                           | 193        |
| 30 | 120                     | 18 | 6  | 300  | 18 | 6  | 4          | 35 | 2190334                         | 36901      |
|    |                         | 9  | 37 |      |    |    |            | 1  | 10475                           | 194        |
| 40 | 120                     | 27 | 43 | 300  | 27 | 43 | 4          | 36 | 2200809                         | 37095      |
|    |                         | 9  | 37 |      |    |    |            | 1  | 10462                           | 193        |
| 50 | 120                     | 37 | 20 | 300  | 37 | 20 | 4          | 37 | 2211271                         | 37288      |
|    |                         | 9  | 37 |      |    |    |            | 1  | 10449                           | 193        |
| 3  | 120                     | 46 | 57 | 300  | 46 | 57 | 4          | 38 | 2221720                         | 37481      |
|    |                         | 9  | 37 |      |    |    |            | 1  | 10436                           | 194        |



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|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli- | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|----------------------|------------|
|    | par                     | /  | // | par. | /  | // | /          | // |                      |            |
| 3  | 120                     | 46 | 57 | 300  | 46 | 57 | 4          | 38 | 2221720              | 37481      |
| 10 | 120                     | 56 | 34 | 300  | 56 | 34 | 4          | 39 | 2232156              | 37675      |
|    |                         | 9  | 38 |      |    |    |            | 0  | 10423                | 193        |
| 20 | 121                     | 6  | 12 | 301  | 6  | 12 | 4          | 39 | 2242579              | 37868      |
|    |                         | 9  | 38 |      |    |    |            | 1  | 10410                | 194        |
| 30 | 121                     | 15 | 50 | 301  | 15 | 50 | 4          | 40 | 2252989              | 38062      |
|    |                         | 9  | 38 |      |    |    |            | 1  | 10397                | 193        |
| 40 | 121                     | 25 | 28 | 301  | 25 | 28 | 4          | 41 | 2263386              | 38255      |
|    |                         | 9  | 38 |      |    |    |            | 1  | 10384                | 193        |
| 50 | 121                     | 35 | 6  | 301  | 35 | 6  | 4          | 41 | 2273770              | 38448      |
|    |                         | 9  | 39 |      |    |    |            | 1  | 10371                | 193        |
| 4  | 121                     | 44 | 45 | 301  | 44 | 45 | 4          | 42 | 2284141              | 38641      |
|    |                         | 9  | 39 |      |    |    |            | 0  | 10358                | 194        |
| 10 | 121                     | 54 | 24 | 301  | 54 | 24 | 4          | 42 | 2294499              | 38835      |
|    |                         | 9  | 40 |      |    |    |            | 1  | 10344                | 193        |
| 20 | 122                     | 4  | 4  | 302  | 4  | 4  | 4          | 43 | 2304843              | 39028      |
|    |                         | 9  | 40 |      |    |    |            | 1  | 10331                | 193        |
| 30 | 122                     | 13 | 44 | 302  | 13 | 44 | 4          | 44 | 2315174              | 39221      |
|    |                         | 9  | 40 |      |    |    |            | 1  | 10317                | 193        |
| 40 | 122                     | 23 | 24 | 302  | 23 | 24 | 4          | 45 | 2325491              | 39414      |
|    |                         | 9  | 40 |      |    |    |            | 1  | 10304                | 193        |
| 50 | 122                     | 33 | 4  | 302  | 33 | 4  | 4          | 46 | 2335795              | 39607      |
|    |                         | 9  | 41 |      |    |    |            | 0  | 10290                | 193        |
| 5  | 122                     | 42 | 45 | 302  | 42 | 45 | 4          | 46 | 2346085              | 39890      |
|    |                         | 9  | 41 |      |    |    |            | 1  | 10276                | 193        |
| 10 | 122                     | 52 | 26 | 302  | 52 | 26 | 4          | 47 | 2356361              | 39993      |
|    |                         | 9  | 41 |      |    |    |            | 1  | 10262                | 193        |
| 20 | 123                     | 2  | 7  | 303  | 2  | 7  | 4          | 48 | 2366623              | 40186      |
|    |                         | 9  | 41 |      |    |    |            | 1  | 10248                | 193        |
| 30 | 123                     | 11 | 48 | 303  | 11 | 48 | 4          | 49 | 2376871              | 40379      |
|    |                         | 9  | 42 |      |    |    |            | 0  | 10234                | 193        |
| 40 | 123                     | 21 | 30 | 303  | 21 | 30 | 4          | 49 | 2387105              | 40572      |
|    |                         | 9  | 42 |      |    |    |            | 1  | 10220                | 193        |
| 50 | 123                     | 31 | 12 | 303  | 31 | 12 | 4          | 50 | 2397325              | 40765      |
|    |                         | 9  | 42 |      |    |    |            | 1  | 10206                | 193        |
| 6  | 123                     | 40 | 54 | 303  | 40 | 54 | 4          | 51 | 2407531              | 40958      |
|    |                         | 9  | 42 |      |    |    |            | 1  | 10191                | 193        |



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|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli-<br>candus. | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|---------------------------------|------------|
|    | par                     | /  | // | par. | /  | // | /          | // |                                 |            |
| 6  | 123                     | 40 | 54 | 303  | 40 | 54 | 4          | 51 | 2407531                         | 40958      |
| 10 | 123                     | 50 | 36 | 303  | 50 | 36 | 4          | 52 | 2417722                         | 41151      |
|    |                         | 9  | 43 |      |    |    |            | 1  | 10176                           | 193        |
| 20 | 124                     | 0  | 19 | 304  | 0  | 19 | 4          | 53 | 2427898                         | 41344      |
|    |                         | 9  | 43 |      |    |    |            | 0  | 10162                           | 193        |
| 30 | 124                     | 10 | 2  | 304  | 10 | 2  | 4          | 53 | 2438060                         | 41537      |
|    |                         | 9  | 43 |      |    |    |            | 1  | 10147                           | 192        |
| 40 | 124                     | 19 | 45 | 304  | 19 | 45 | 4          | 54 | 2448207                         | 41729      |
|    |                         | 9  | 43 |      |    |    |            | 1  | 11032                           | 193        |
| 50 | 124                     | 29 | 28 | 304  | 29 | 28 | 4          | 55 | 2458339                         | 41922      |
|    |                         | 9  | 44 |      |    |    |            | 0  | 10117                           | 193        |
| 7  | 124                     | 39 | 12 | 304  | 39 | 12 | 4          | 55 | 2468456                         | 42115      |
|    |                         | 9  | 44 |      |    |    |            | 1  | 10101                           | 193        |
| 10 | 124                     | 48 | 56 | 304  | 48 | 56 | 4          | 56 | 2478557                         | 42308      |
|    |                         | 9  | 44 |      |    |    |            | 0  | 10096                           | 193        |
| 20 | 124                     | 58 | 40 | 304  | 58 | 40 | 4          | 56 | 2488643                         | 42501      |
|    |                         | 9  | 45 |      |    |    |            | 1  | 10071                           | 192        |
| 30 | 125                     | 8  | 25 | 305  | 8  | 25 | 4          | 57 | 2498714                         | 42693      |
|    |                         | 9  | 45 |      |    |    |            | 0  | 10056                           | 193        |
| 40 | 125                     | 18 | 10 | 305  | 18 | 10 | 4          | 57 | 2508770                         | 42886      |
|    |                         | 9  | 45 |      |    |    |            | 1  | 10041                           | 193        |
| 50 | 125                     | 27 | 55 | 305  | 27 | 55 | 4          | 58 | 2518811                         | 43079      |
|    |                         | 9  | 45 |      |    |    |            | 1  | 10025                           | 192        |
| 8  | 125                     | 37 | 40 | 305  | 37 | 40 | 4          | 59 | 2528836                         | 43271      |
|    |                         | 9  | 46 |      |    |    |            | 0  | 10009                           | 193        |
| 10 | 125                     | 47 | 26 | 305  | 47 | 26 | 4          | 59 | 2538845                         | 43464      |
|    |                         | 9  | 46 |      |    |    |            | 1  | 9993                            | 193        |
| 20 | 125                     | 57 | 12 | 305  | 57 | 12 | 5          | 0  | 2548838                         | 43657      |
|    |                         | 9  | 46 |      |    |    |            | 1  | 9979                            | 192        |
| 30 | 126                     | 6  | 58 | 306  | 6  | 58 | 5          | 1  | 2558817                         | 43849      |
|    |                         | 9  | 46 |      |    |    |            | 0  | 9962                            | 192        |
| 40 | 126                     | 16 | 45 | 306  | 16 | 45 | 5          | 1  | 2568779                         | 44041      |
|    |                         | 9  | 47 |      |    |    |            | 1  | 9946                            | 192        |
| 50 | 126                     | 26 | 32 | 306  | 26 | 32 | 5          | 2  | 2578725                         | 44233      |
|    |                         | 9  | 47 |      |    |    |            | 0  | 9930                            | 192        |
| 9  | 126                     | 36 | 19 | 306  | 36 | 19 | 5          | 2  | 2588655                         | 44425      |
|    |                         | 9  | 47 |      |    |    |            | 1  | 9914                            | 192        |



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|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multiplic. | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|-----------------------|------------|
|    | par.                    | /  | // | par. | /  | // | /          | // |                       |            |
| 9  | 126                     | 36 | 19 | 306  | 36 | 19 | 5          | 2  | 2588655               | 44425      |
| 10 | 126                     | 46 | 6  | 306  | 46 | 6  | 5          | 3  | 2598569               | 44617      |
|    |                         | 9  | 48 |      |    |    |            | 0  | 9898                  | 192        |
| 20 | 126                     | 55 | 54 | 306  | 55 | 54 | 5          | 3  | 2608467               | 44809      |
|    |                         | 9  | 48 |      |    |    |            | 1  | 9882                  | 192        |
| 30 | 127                     | 5  | 42 | 307  | 5  | 42 | 5          | 4  | 2618349               | 45001      |
|    |                         | 9  | 48 |      |    |    |            | 0  | 9865                  | 192        |
| 40 | 127                     | 15 | 30 | 307  | 15 | 30 | 5          | 4  | 2628214               | 45193      |
|    |                         | 9  | 49 |      |    |    |            | 1  | 9848                  | 192        |
| 50 | 127                     | 25 | 19 | 307  | 25 | 29 | 5          | 5  | 2638062               | 45385      |
|    |                         | 9  | 49 |      |    |    |            | 0  | 9831                  | 192        |
| 10 | 127                     | 35 | 8  | 307  | 35 | 8  | 5          | 5  | 2647893               | 45577      |
|    |                         | 9  | 49 |      |    |    |            | 1  | 9814                  | 192        |
| 10 | 127                     | 44 | 57 | 307  | 44 | 57 | 5          | 6  | 2657707               | 45769      |
|    |                         | 9  | 49 |      |    |    |            | 0  | 9798                  | 192        |
| 20 | 127                     | 54 | 46 | 307  | 54 | 46 | 5          | 6  | 2667505               | 45961      |
|    |                         | 9  | 50 |      |    |    |            | 1  | 9781                  | 192        |
| 30 | 128                     | 4  | 36 | 307  | 4  | 36 | 5          | 7  | 2677286               | 46153      |
|    |                         | 9  | 50 |      |    |    |            | 0  | 9764                  | 191        |
| 40 | 128                     | 14 | 26 | 308  | 14 | 26 | 5          | 7  | 2687050               | 46344      |
|    |                         | 9  | 50 |      |    |    |            | 1  | 9746                  | 191        |
| 50 | 128                     | 24 | 16 | 308  | 24 | 16 | 5          | 8  | 2696796               | 46535      |
|    |                         | 9  | 51 |      |    |    |            | 0  | 9729                  | 191        |
| II | 128                     | 34 | 7  | 308  | 34 | 7  | 5          | 8  | 2706525               | 46726      |
|    |                         | 9  | 51 |      |    |    |            | 0  | 9711                  | 191        |
| 10 | 128                     | 43 | 58 | 308  | 43 | 58 | 5          | 8  | 2716236               | 46917      |
|    |                         | 9  | 51 |      |    |    |            | 1  | 9694                  | 191        |
| 20 | 128                     | 53 | 49 | 308  | 53 | 49 | 5          | 9  | 2725930               | 47108      |
|    |                         | 9  | 51 |      |    |    |            | 0  | 9676                  | 191        |
| 30 | 129                     | 3  | 40 | 309  | 3  | 40 | 5          | 9  | 2735606               | 47299      |
|    |                         | 9  | 52 |      |    |    |            | 0  | 9659                  | 191        |
| 40 | 129                     | 13 | 32 | 309  | 13 | 32 | 5          | 9  | 2745265               | 47490      |
|    |                         | 9  | 52 |      |    |    |            | 1  | 9641                  | 191        |
| 50 | 129                     | 23 | 24 | 309  | 23 | 24 | 5          | 10 | 2754906               | 47681      |
|    |                         | 9  | 52 |      |    |    |            | 0  | 9623                  | 191        |
| 12 | 129                     | 33 | 16 | 309  | 33 | 16 | 5          | 10 | 2764529               | 47872      |
|    |                         | 9  | 53 |      |    |    |            | 0  | 9605                  | 191        |



# CANON MEDIATIONVM

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|           | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |         | Numerus<br>multiplic. | Dra<br>Ad.   |
|-----------|-------------------------|----|----|------|----|----|------------|---------|-----------------------|--------------|
|           | par.                    | /  | // | par. | /  | // | /          | //      |                       |              |
| <b>12</b> | 129                     | 33 | 16 | 309  | 33 | 16 | 5          | 10      | 2764529               | 47872        |
| 10        | 129                     | 43 | 9  | 309  | 43 | 9  | 5          | 10<br>1 | 2774134<br>9587       | 48063<br>191 |
| 20        | 129                     | 53 | 2  | 309  | 53 | 2  | 5          | 11<br>0 | 2783721<br>9569       | 48254<br>190 |
| 30        | 130                     | 2  | 55 | 310  | 2  | 55 | 5          | 11<br>0 | 2793290<br>9550       | 48444<br>190 |
| 40        | 130                     | 12 | 48 | 310  | 12 | 48 | 5          | 11<br>1 | 2802840<br>9531       | 48634<br>190 |
| 50        | 130                     | 22 | 42 | 310  | 22 | 42 | 5          | 12<br>0 | 2812371<br>9513       | 48824<br>190 |
| <b>13</b> | 130                     | 32 | 36 | 310  | 32 | 36 | 5          | 12<br>0 | 2821884<br>9494       | 49014<br>190 |
| 10        | 130                     | 42 | 30 | 310  | 42 | 30 | 5          | 12<br>0 | 2831378<br>9475       | 49204<br>190 |
| 20        | 130                     | 52 | 25 | 310  | 52 | 25 | 5          | 12<br>1 | 2840853<br>9456       | 49394<br>190 |
| 30        | 131                     | 2  | 20 | 310  | 2  | 20 | 5          | 13<br>0 | 2850309<br>9437       | 49584<br>189 |
| 40        | 131                     | 12 | 15 | 311  | 12 | 15 | 5          | 13<br>0 | 2859746<br>9418       | 49773<br>189 |
| 50        | 131                     | 22 | 11 | 311  | 22 | 11 | 5          | 13<br>0 | 2869164<br>9399       | 49962<br>189 |
| <b>14</b> | 131                     | 32 | 7  | 311  | 32 | 7  | 5          | 13<br>1 | 2878563<br>9380       | 50151<br>189 |
| 10        | 131                     | 42 | 3  | 311  | 42 | 3  | 5          | 14<br>0 | 2887943<br>9361       | 50340<br>189 |
| 20        | 131                     | 52 | 0  | 311  | 52 | 0  | 5          | 14<br>0 | 2897304<br>9341       | 50529<br>189 |
| 30        | 132                     | 1  | 57 | 312  | 1  | 57 | 5          | 14<br>0 | 2906645<br>9321       | 50718<br>189 |
| 40        | 132                     | 11 | 54 | 312  | 11 | 54 | 5          | 14<br>1 | 2915966<br>9301       | 50907<br>189 |
| 50        | 132                     | 21 | 51 | 312  | 21 | 51 | 5          | 15<br>0 | 2925267<br>9282       | 51096<br>189 |
| <b>15</b> | 132                     | 31 | 48 | 312  | 31 | 48 | 5          | 15<br>0 | 2934549<br>9261       | 51285<br>188 |



Ω

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra.<br>Ad. |    | Numerus<br>multipli-<br>candus. | Dra.<br>Ad. |  |
|----|-------------------------|----|----|------|----|----|-------------|----|---------------------------------|-------------|--|
|    | Par                     | /  | // | Par. | /  | // | /           | // |                                 |             |  |
| 15 | 132                     | 31 | 48 | 312  | 31 | 48 | 5           | 15 | 2934549                         | 51285       |  |
| 10 | 132                     | 41 | 46 | 312  | 41 | 46 | 5           | 15 | 2943810                         | 51473       |  |
|    |                         | 9  | 58 |      |    |    |             | 0  | 9241                            | 188         |  |
| 20 | 132                     | 51 | 44 | 312  | 51 | 44 | 5           | 15 | 2953051                         | 51661       |  |
|    |                         | 9  | 59 |      |    |    |             | 0  | 9221                            | 188         |  |
| 30 | 133                     | 1  | 43 | 313  | 1  | 43 | 5           | 15 | 2962272                         | 51849       |  |
|    |                         | 9  | 59 |      |    |    |             | 0  | 9201                            | 188         |  |
| 40 | 133                     | 11 | 42 | 313  | 11 | 42 | 5           | 15 | 2971473                         | 52037       |  |
|    |                         | 9  | 59 |      |    |    |             | 0  | 9180                            | 188         |  |
| 50 | 133                     | 21 | 41 | 313  | 21 | 41 | 5           | 15 | 2980653                         | 52225       |  |
|    |                         | 9  | 59 |      |    |    |             | 0  | 9159                            | 188         |  |
| 16 | 133                     | 31 | 40 | 313  | 31 | 40 | 5           | 15 | 2989812                         | 52413       |  |
|    |                         | 10 | 0  |      |    |    |             | 0  | 9139                            | 187         |  |
| 10 | 133                     | 41 | 40 | 313  | 41 | 40 | 5           | 15 | 2998951                         | 52600       |  |
|    |                         | 10 | 0  |      |    |    |             | 1  | 9118                            | 187         |  |
| 20 | 133                     | 51 | 40 | 313  | 51 | 40 | 5           | 16 | 3008069                         | 52787       |  |
|    |                         | 10 | 0  |      |    |    |             | 0  | 9097                            | 187         |  |
| 30 | 134                     | 1  | 40 | 314  | 1  | 40 | 5           | 16 | 3017166                         | 52974       |  |
|    |                         | 10 | 1  |      |    |    |             | 0  | 9076                            | 187         |  |
| 40 | 134                     | 11 | 41 | 314  | 11 | 41 | 5           | 16 | 3026242                         | 53161       |  |
|    |                         | 10 | 1  |      |    |    |             | 0  | 9055                            | 187         |  |
| 50 | 134                     | 21 | 42 | 314  | 21 | 42 | 5           | 16 | 3035297                         | 53348       |  |
|    |                         | 10 | 1  |      |    |    |             | 0  | 9034                            | 186         |  |
| 17 | 134                     | 31 | 43 | 314  | 31 | 43 | 5           | 16 | 3044331                         | 53534       |  |
|    |                         | 10 | 1  |      |    |    |             | 0  | 9013                            | 186         |  |
| 10 | 134                     | 41 | 44 | 314  | 41 | 44 | 5           | 16 | 3053344                         | 53720       |  |
|    |                         | 10 | 2  |      |    |    |             | 0  | 8991                            | 186         |  |
| 20 | 134                     | 51 | 46 | 314  | 51 | 46 | 5           | 16 | 3062335                         | 53906       |  |
|    |                         | 10 | 2  |      |    |    |             | 0  | 8970                            | 186         |  |
| 30 | 135                     | 1  | 48 | 315  | 1  | 48 | 5           | 16 | 3071305                         | 54092       |  |
|    |                         | 10 | 2  |      |    |    |             | 0  | 8948                            | 185         |  |
| 40 | 135                     | 11 | 50 | 315  | 11 | 50 | 5           | 16 | 3080253                         | 54277       |  |
|    |                         | 10 | 3  |      |    |    |             | 1  | 8926                            | 185         |  |
| 50 | 135                     | 21 | 53 | 315  | 21 | 53 | 5           | 15 | 3089179                         | 54462       |  |
|    |                         | 10 | 3  |      |    |    |             | 0  | 8904                            | 185         |  |
| 18 | 135                     | 31 | 56 | 315  | 31 | 56 | 5           | 15 | 3098083                         | 54647       |  |
|    |                         | 10 | 3  |      |    |    |             | 0  | 8882                            | 185         |  |



# CANON MEDIATIONVM

| <div> <math>\Omega</math> <math>\approx</math> </div> |     |    |      |     |    |    |            |    |                      |         |            |
|-------------------------------------------------------|-----|----|------|-----|----|----|------------|----|----------------------|---------|------------|
| Radix ascensio-<br>num.                               |     |    |      |     |    |    | Dra<br>Ad. |    | Numerus<br>multipli- |         | Dra<br>Ad. |
| par.                                                  | /   | // | par. | /   | // | /  | //         | /  | //                   | candus. |            |
| 18                                                    | 135 | 31 | 56   | 315 | 31 | 56 | 5          | 15 |                      | 3098083 | 54647      |
| 10                                                    | 135 | 41 | 59   | 315 | 41 | 59 | 5          | 15 |                      | 3106965 | 54832      |
|                                                       |     | 10 | 4    |     |    |    |            | 0  |                      | 8860    | 184        |
| 20                                                    | 135 | 52 | 3    | 315 | 52 | 3  | 5          | 15 |                      | 3115825 | 55016      |
|                                                       |     | 10 | 4    |     |    |    |            | 0  |                      | 8838    | 184        |
| 30                                                    | 136 | 2  | 7    | 316 | 2  | 7  | 5          | 15 |                      | 3124663 | 55200      |
|                                                       |     | 10 | 4    |     |    |    |            | 0  |                      | 8815    | 184        |
| 40                                                    | 136 | 12 | 11   | 316 | 12 | 11 | 5          | 15 |                      | 3133478 | 55384      |
|                                                       |     | 10 | 5    |     |    |    |            | 0  |                      | 8793    | 184        |
| 50                                                    | 136 | 22 | 16   | 316 | 22 | 16 | 5          | 15 |                      | 3142271 | 55568      |
|                                                       |     | 10 | 5    |     |    |    |            | 0  |                      | 8771    | 184        |
| 19                                                    | 136 | 32 | 21   | 316 | 32 | 21 | 5          | 15 |                      | 3151042 | 55754      |
|                                                       |     | 10 | 5    |     |    |    |            | 0  |                      | 8748    | 184        |
| 10                                                    | 136 | 42 | 26   | 316 | 42 | 26 | 5          | 15 |                      | 3159790 | 55937      |
|                                                       |     | 10 | 5    |     |    |    |            | 0  |                      | 8725    | 183        |
| 20                                                    | 136 | 52 | 31   | 316 | 52 | 31 | 5          | 15 |                      | 3168515 | 56120      |
|                                                       |     | 10 | 6    |     |    |    |            | 1  |                      | 8702    | 183        |
| 30                                                    | 137 | 2  | 37   | 317 | 2  | 37 | 5          | 14 |                      | 3177217 | 56303      |
|                                                       |     | 10 | 6    |     |    |    |            | 0  |                      | 8679    | 183        |
| 40                                                    | 137 | 12 | 43   | 317 | 12 | 43 | 5          | 14 |                      | 3185896 | 56486      |
|                                                       |     | 10 | 6    |     |    |    |            | 0  |                      | 8656    | 183        |
| 50                                                    | 137 | 22 | 49   | 317 | 22 | 49 | 5          | 14 |                      | 3194552 | 56669      |
|                                                       |     | 10 | 7    |     |    |    |            | 0  |                      | 8632    | 182        |
| 20                                                    | 137 | 32 | 56   | 317 | 32 | 56 | 5          | 14 |                      | 3203184 | 56851      |
|                                                       |     | 10 | 7    |     |    |    |            | 0  |                      | 8609    | 182        |
| 10                                                    | 137 | 43 | 3    | 317 | 43 | 3  | 5          | 14 |                      | 3211793 | 57033      |
|                                                       |     | 10 | 7    |     |    |    |            | 0  |                      | 8586    | 182        |
| 20                                                    | 137 | 53 | 10   | 317 | 53 | 10 | 5          | 14 |                      | 3220379 | 57215      |
|                                                       |     | 10 | 8    |     |    |    |            | 1  |                      | 8562    | 182        |
| 30                                                    | 138 | 3  | 18   | 318 | 3  | 18 | 5          | 13 |                      | 3228941 | 57397      |
|                                                       |     | 10 | 8    |     |    |    |            | 0  |                      | 8538    | 181        |
| 40                                                    | 138 | 13 | 26   | 318 | 13 | 26 | 5          | 13 |                      | 3237479 | 57578      |
|                                                       |     | 10 | 8    |     |    |    |            | 0  |                      | 8514    | 181        |
| 50                                                    | 138 | 23 | 34   | 318 | 23 | 34 | 5          | 13 |                      | 3245993 | 57759      |
|                                                       |     | 10 | 9    |     |    |    |            | 0  |                      | 8490    | 181        |
| 21                                                    | 138 | 33 | 43   | 318 | 33 | 43 | 5          | 13 |                      | 3254483 | 57940      |
|                                                       |     | 10 | 9    |     |    |    |            | 0  |                      | 8466    | 181        |



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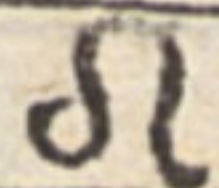
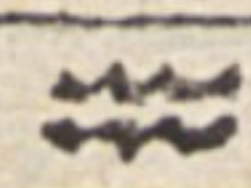
|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra.<br>Ad. |    | Numerus<br>multipli- | Dra.<br>Ad. |
|----|-------------------------|----|----|------|----|----|-------------|----|----------------------|-------------|
|    | Par                     | /  | // | Par. | /  | // | /           | // |                      |             |
|    |                         |    |    |      |    |    |             |    | candus.              |             |
| 21 | 138                     | 33 | 43 | 318  | 33 | 43 | 5           | 13 | 3254483              | 57940       |
| 10 | 138                     | 43 | 52 | 318  | 43 | 52 | 5           | 13 | 3262949              | 58121       |
|    |                         | 10 | 9  |      |    |    |             | 0  | 8442                 | 180         |
| 20 | 138                     | 54 | 1  | 318  | 54 | 1  | 5           | 13 | 3271391              | 58301       |
|    |                         | 10 | 10 |      |    |    |             | 0  | 8417                 | 180         |
| 30 | 139                     | 4  | 11 | 319  | 4  | 11 | 5           | 13 | 3279808              | 58481       |
|    |                         | 10 | 10 |      |    |    |             | 1  | 8393                 | 180         |
| 40 | 139                     | 14 | 21 | 319  | 14 | 21 | 5           | 12 | 3288201              | 58661       |
|    |                         | 10 | 10 |      |    |    |             | 0  | 8368                 | 179         |
| 50 | 139                     | 24 | 31 | 319  | 24 | 31 | 5           | 12 | 3296569              | 58840       |
|    |                         | 10 | 10 |      |    |    |             |    | 8343                 | 179         |
| 22 | 139                     | 34 | 41 | 319  | 34 | 41 | 5           | 12 | 3304912              | 59019       |
|    |                         | 10 | 11 |      |    |    |             | 0  | 8318                 | 179         |
| 10 | 139                     | 44 | 52 | 319  | 44 | 52 | 5           | 12 | 3313230              | 59198       |
|    |                         | 10 | 11 |      |    |    |             | 1  | 8294                 | 178         |
| 20 | 139                     | 55 | 3  | 319  | 55 | 3  | 5           | 11 | 3321524              | 59376       |
|    |                         | 10 | 11 |      |    |    |             | 0  | 8269                 | 178         |
| 30 | 140                     | 5  | 14 | 320  | 5  | 14 | 5           | 11 | 3329793              | 59554       |
|    |                         | 10 | 11 |      |    |    |             | 0  | 8244                 | 178         |
| 40 | 140                     | 15 | 25 | 320  | 15 | 25 | 5           | 11 | 3338037              | 59732       |
|    |                         | 10 | 12 |      |    |    |             | 1  | 8219                 | 178         |
| 50 | 140                     | 25 | 37 | 320  | 25 | 37 | 5           | 10 | 334625               | 59910       |
|    |                         | 10 | 12 |      |    |    |             | 0  | 8193                 | 177         |
| 23 | 140                     | 35 | 49 | 320  | 35 | 49 | 5           | 10 | 335449               | 60087       |
|    |                         | 10 | 12 |      |    |    |             | 0  | 8168                 | 177         |
| 10 | 140                     | 46 | 1  | 320  | 46 | 1  | 5           | 10 | 3362617              | 60264       |
|    |                         | 10 | 13 |      |    |    |             | 1  | 8142                 | 277         |
| 20 | 140                     | 56 | 14 | 320  | 56 | 14 | 5           | 9  | 3370759              | 60441       |
|    |                         | 10 | 13 |      |    |    |             | 0  | 8116                 | 176         |
| 30 | 141                     | 6  | 27 | 321  | 6  | 27 | 5           | 9  | 3378875              | 60617       |
|    |                         | 10 | 13 |      |    |    |             | 1  | 8090                 | 176         |
| 40 | 141                     | 16 | 40 | 321  | 16 | 40 | 5           | 8  | 3386965              | 60793       |
|    |                         | 10 | 14 |      |    |    |             | 0  | 8064                 | 175         |
| 50 | 141                     | 26 | 54 | 321  | 26 | 54 | 5           | 8  | 3395029              | 60968       |
|    |                         | 10 | 14 |      |    |    |             | 1  | 8038                 | 175         |
| 24 | 141                     | 37 | 8  | 321  | 37 | 8  | 5           | 7  | 3403067              | 61143       |
|    |                         | 10 | 14 |      |    |    |             |    | 8012                 | 175         |



# CANON MEDIATIONVM

| <div> <math>\Omega</math> </div> |     |    |      |     |    |            |    |                                 |         |            |  |
|----------------------------------|-----|----|------|-----|----|------------|----|---------------------------------|---------|------------|--|
| Radix ascensio-<br>num.          |     |    |      |     |    | Dra<br>Ad. |    | Numerus<br>multipli-<br>candus. |         | Dra<br>Ad. |  |
| par.                             | /   | // | par. | /   | // | /          | // |                                 |         |            |  |
| <b>24</b>                        | 141 | 37 | 8    | 321 | 37 | 8          | 5  | 7                               | 3403067 | 61143      |  |
| 10                               | 141 | 47 | 22   | 321 | 47 | 22         | 5  | 7                               | 3411079 | 61318      |  |
|                                  |     | 10 | 15   |     |    |            |    | 1                               | 7986    | 174        |  |
| 20                               | 141 | 57 | 37   | 321 | 57 | 37         | 5  | 6                               | 3419065 | 61492      |  |
|                                  |     | 10 | 15   |     |    |            |    | 0                               | 7959    | 174        |  |
| 30                               | 142 | 8  | 52   | 322 | 8  | 52         | 5  | 6                               | 3427024 | 61666      |  |
|                                  |     | 10 | 15   |     |    |            |    | 1                               | 7732    | 174        |  |
| 40                               | 142 | 18 | 7    | 322 | 18 | 7          | 5  | 5                               | 3434956 | 61840      |  |
|                                  |     | 10 | 16   |     |    |            |    | 0                               | 7906    | 173        |  |
| 50                               | 142 | 28 | 23   | 322 | 28 | 23         | 5  | 5                               | 3442862 | 62013      |  |
|                                  |     | 10 | 16   |     |    |            |    | 0                               | 7879    | 173        |  |
| <b>25</b>                        | 142 | 38 | 39   | 322 | 38 | 39         | 5  | 5                               | 3450741 | 62186      |  |
|                                  |     | 10 | 16   |     |    |            |    | 1                               | 7852    | 173        |  |
| 10                               | 142 | 48 | 55   | 322 | 48 | 55         | 5  | 4                               | 3458593 | 62359      |  |
|                                  |     | 10 | 16   |     |    |            |    | 0                               | 7825    | 172        |  |
| 20                               | 142 | 59 | 11   | 322 | 59 | 11         | 5  | 4                               | 3466418 | 62531      |  |
|                                  |     | 10 | 17   |     |    |            |    | 1                               | 7798    | 172        |  |
| 30                               | 143 | 9  | 28   | 323 | 9  | 28         | 5  | 3                               | 3474216 | 62703      |  |
|                                  |     | 10 | 17   |     |    |            |    | 0                               | 7770    | 171        |  |
| 40                               | 143 | 19 | 45   | 323 | 19 | 45         | 5  | 3                               | 3481986 | 62874      |  |
|                                  |     | 10 | 17   |     |    |            |    | 1                               | 7743    | 171        |  |
| 50                               | 143 | 30 | 2    | 323 | 30 | 2          | 5  | 2                               | 3489729 | 63045      |  |
|                                  |     | 10 | 17   |     |    |            |    | 1                               | 7716    | 170        |  |
| <b>26</b>                        | 143 | 40 | 19   | 323 | 40 | 19         | 5  | 1                               | 3497445 | 63215      |  |
|                                  |     | 10 | 18   |     |    |            |    | 0                               | 7688    | 170        |  |
| 10                               | 143 | 50 | 37   | 323 | 50 | 37         | 5  | 1                               | 3505133 | 63385      |  |
|                                  |     | 10 | 18   |     |    |            |    | 1                               | 7660    | 170        |  |
| 20                               | 144 | 0  | 55   | 324 | 0  | 55         | 5  | 0                               | 3512793 | 63555      |  |
|                                  |     | 10 | 19   |     |    |            |    | 0                               | 7632    | 169        |  |
| 30                               | 144 | 11 | 14   | 324 | 11 | 14         | 5  | 0                               | 3520425 | 63724      |  |
|                                  |     | 10 | 19   |     |    |            |    | 1                               | 7604    | 169        |  |
| 40                               | 144 | 21 | 33   | 324 | 21 | 33         | 4  | 59                              | 3528029 | 63893      |  |
|                                  |     | 10 | 19   |     |    |            |    | 0                               | 7576    | 168        |  |
| 50                               | 144 | 31 | 52   | 324 | 31 | 52         | 4  | 59                              | 3535605 | 64061      |  |
|                                  |     | 10 | 19   |     |    |            |    | 1                               | 7547    | 168        |  |
| <b>27</b>                        | 144 | 42 | 11   | 324 | 42 | 11         | 4  | 58                              | 3543152 | 64229      |  |
|                                  |     | 10 | 20   |     |    |            |    | 0                               | 7519    | 168        |  |



|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli- | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|----------------------|------------|
|    | par                     | /  | // | par. | /  | // | /          | // |                      |            |
| 27 | 144                     | 42 | 11 | 324  | 42 | 11 | 4          | 58 | 3543152              | 64220      |
| 10 | 144                     | 52 | 31 | 324  | 52 | 31 | 4          | 58 | 3550671              | 64397      |
|    |                         | 10 | 20 |      |    |    |            | 1  | 7491                 | 167        |
| 20 | 145                     | 2  | 51 | 325  | 2  | 51 | 4          | 57 | 3558162              | 64564      |
|    |                         | 10 | 20 |      |    |    |            | 1  | 7462                 | 167        |
| 30 | 145                     | 13 | 11 | 325  | 13 | 11 | 4          | 56 | 3565624              | 64731      |
|    |                         | 10 | 20 |      |    |    |            | 1  | 7434                 | 166        |
| 40 | 145                     | 23 | 31 | 325  | 23 | 31 | 4          | 55 | 3573058              | 94897      |
|    |                         | 10 | 21 |      |    |    |            | 0  | 7405                 | 166        |
| 50 | 145                     | 33 | 52 | 325  | 33 | 52 | 4          | 55 | 3580463              | 65063      |
|    |                         | 10 | 21 |      |    |    |            | 1  | 7376                 | 165        |
| 28 | 145                     | 44 | 13 | 325  | 44 | 13 | 4          | 54 | 3587839              | 65228      |
|    |                         | 10 | 21 |      |    |    |            | 1  | 7347                 | 165        |
| 10 | 145                     | 54 | 34 | 325  | 54 | 34 | 4          | 53 | 3595186              | 65393      |
|    |                         | 10 | 22 |      |    |    |            | 1  | 7317                 | 165        |
| 20 | 146                     | 4  | 56 | 326  | 4  | 56 | 4          | 52 | 3602503              | 65558      |
|    |                         | 10 | 22 |      |    |    |            | 0  | 7288                 | 164        |
| 30 | 146                     | 15 | 18 | 326  | 15 | 18 | 4          | 52 | 3609791              | 65722      |
|    |                         | 10 | 22 |      |    |    |            | 1  | 7258                 | 164        |
| 40 | 146                     | 25 | 40 | 326  | 25 | 40 | 4          | 51 | 3617049              | 65886      |
|    |                         | 10 | 22 |      |    |    |            | 1  | 7229                 | 163        |
| 50 | 146                     | 36 | 2  | 326  | 36 | 2  | 4          | 50 | 3624278              | 66049      |
|    |                         | 10 | 23 |      |    |    |            | 1  | 7199                 | 163        |
| 29 | 146                     | 46 | 25 | 326  | 46 | 25 | 4          | 49 | 3631477              | 66212      |
|    |                         | 10 | 23 |      |    |    |            | 1  | 7169                 | 162        |
| 10 | 146                     | 56 | 48 | 326  | 56 | 48 | 4          | 48 | 3638646              | 66374      |
|    |                         | 10 | 23 |      |    |    |            | 0  | 7139                 | 162        |
| 20 | 147                     | 7  | 11 | 327  | 7  | 11 | 4          | 48 | 3645785              | 66536      |
|    |                         | 10 | 24 |      |    |    |            | 1  | 7109                 | 161        |
| 30 | 147                     | 17 | 35 | 327  | 17 | 35 | 4          | 47 | 3652894              | 66637      |
|    |                         | 10 | 24 |      |    |    |            | 1  | 7079                 | 161        |
| 40 | 147                     | 27 | 59 | 327  | 27 | 59 | 4          | 46 | 3659973              | 66858      |
|    |                         | 10 | 24 |      |    |    |            | 1  | 7049                 | 160        |
| 50 | 147                     | 38 | 23 | 327  | 48 | 48 | 4          | 45 | 3667022              | 67018      |
|    |                         | 10 | 25 |      |    |    |            | 1  | 7018                 | 160        |
| 30 | 147                     | 48 | 48 | 327  | 48 | 48 | 4          | 44 | 3674040              | 67178      |
|    |                         | 10 | 25 |      |    |    |            | 1  | 6988                 | 159        |



# CANON MEDIATIONVM

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|          | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli-<br>candus. | Dra<br>Ad. |
|----------|-------------------------|----|----|------|----|----|------------|----|---------------------------------|------------|
|          | par                     | /  | // | par. | /  | // | /          | // |                                 |            |
| <b>O</b> | 147                     | 48 | 48 | 327  | 48 | 48 | 4          | 44 | 3674040                         | 67178      |
| 10       | 147                     | 59 | 13 | 327  | 59 | 13 | 4          | 43 | 3681028                         | 67337      |
|          |                         | 10 | 25 |      |    |    |            | 1  | 6957                            | 158        |
| 20       | 148                     | 9  | 38 | 327  | 9  | 38 | 4          | 42 | 3687895                         | 67495      |
|          |                         | 10 | 25 |      |    |    |            | 1  | 6927                            | 158        |
| 30       | 148                     | 20 | 3  | 328  | 20 | 3  | 4          | 41 | 3694912                         | 67653      |
|          |                         | 10 | 26 |      |    |    |            | 0  | 6896                            | 158        |
| 40       | 148                     | 30 | 29 | 328  | 30 | 29 | 4          | 41 | 3701808                         | 67811      |
|          |                         | 10 | 26 |      |    |    |            | 1  | 6865                            | 157        |
| 50       | 148                     | 40 | 55 | 328  | 40 | 55 | 4          | 40 | 3708673                         | 67968      |
|          |                         | 10 | 26 |      |    |    |            | 1  | 6833                            | 156        |
| <b>I</b> | 148                     | 51 | 21 | 328  | 51 | 21 | 4          | 39 | 3715506                         | 68124      |
|          |                         | 10 | 27 |      |    |    |            | 1  | 6802                            | 156        |
| 10       | 149                     | 1  | 48 | 329  | 1  | 48 | 4          | 38 | 3722308                         | 68280      |
|          |                         | 10 | 27 |      |    |    |            | 1  | 6771                            | 155        |
| 20       | 149                     | 12 | 15 | 329  | 12 | 15 | 4          | 37 | 3729079                         | 68435      |
|          |                         | 10 | 27 |      |    |    |            | 1  | 6739                            | 155        |
| 30       | 149                     | 22 | 42 | 329  | 22 | 42 | 4          | 36 | 3735818                         | 68590      |
|          |                         | 10 | 27 |      |    |    |            | 0  | 6708                            | 154        |
| 40       | 149                     | 33 | 9  | 329  | 33 | 9  | 4          | 36 | 3742526                         | 68744      |
|          |                         | 10 | 28 |      |    |    |            | 1  | 6677                            | 154        |
| 50       | 149                     | 43 | 37 | 329  | 43 | 37 | 4          | 35 | 3749203                         | 68898      |
|          |                         | 10 | 28 |      |    |    |            | 1  | 6645                            | 153        |
| <b>2</b> | 149                     | 54 | 5  | 329  | 54 | 5  | 4          | 34 | 3755848                         | 69051      |
|          |                         | 10 | 28 |      |    |    |            | 1  | 6613                            | 153        |
| 10       | 150                     | 4  | 33 | 330  | 4  | 33 | 4          | 33 | 3762461                         | 69204      |
|          |                         | 10 | 29 |      |    |    |            | 1  | 6581                            | 152        |
| 20       | 150                     | 15 | 2  | 330  | 15 | 2  | 4          | 32 | 3769042                         | 69356      |
|          |                         | 10 | 29 |      |    |    |            | 0  | 6549                            | 151        |
| 30       | 150                     | 25 | 31 | 330  | 25 | 31 | 4          | 32 | 3775591                         | 69507      |
|          |                         | 10 | 29 |      |    |    |            | 1  | 6516                            | 151        |
| 40       | 150                     | 36 | 0  | 330  | 36 | 0  | 4          | 31 | 3782107                         | 69658      |
|          |                         | 10 | 29 |      |    |    |            | 1  | 6483                            | 150        |
| 50       | 150                     | 46 | 29 | 330  | 46 | 29 | 4          | 30 | 3788590                         | 69808      |
|          |                         | 10 | 29 |      |    |    |            | 1  | 6451                            | 149        |
| <b>3</b> | 150                     | 56 | 58 | 330  | 56 | 58 | 4          | 29 | 3795041                         | 69957      |
|          |                         | 10 | 29 |      |    |    |            | 1  | 6418                            | 149        |



mp X

Radix ascensio-  
num.Dra  
Ad.Numerus  
multiplic.Dra  
Ad.

|    | par. | I  | II | par. | I  | II | I | II |         |       |
|----|------|----|----|------|----|----|---|----|---------|-------|
| 3  | 150  | 56 | 58 | 330  | 56 | 58 | 4 | 29 | 3795041 | 69957 |
| 10 | 151  | 7  | 27 | 331  | 7  | 27 | 4 | 28 | 3801459 | 70106 |
|    |      | 10 | 30 |      |    |    |   | 1  | 6385    | 148   |
| 20 | 151  | 17 | 57 | 331  | 17 | 57 | 4 | 27 | 3807844 | 70254 |
|    |      | 10 | 30 |      |    |    |   | 1  | 6353    | 148   |
| 30 | 151  | 28 | 27 | 331  | 28 | 27 | 4 | 26 | 3814197 | 70402 |
|    |      | 10 | 31 |      |    |    |   | 1  | 6320    | 147   |
| 40 | 151  | 38 | 58 | 331  | 38 | 58 | 4 | 25 | 3820517 | 70549 |
|    |      | 10 | 31 |      |    |    |   | 1  | 6287    | 146   |
| 50 | 151  | 49 | 29 | 331  | 49 | 29 | 4 | 24 | 3826804 | 70695 |
|    |      | 10 | 31 |      |    |    |   | 1  | 6254    | 146   |
| 4  | 152  | 0  | 0  | 332  | 0  | 0  | 4 | 23 | 3833058 | 70841 |
|    |      | 10 | 31 |      |    |    |   | 1  | 6220    | 145   |
| 10 | 152  | 10 | 31 | 332  | 10 | 31 | 4 | 22 | 3839278 | 70986 |
|    |      | 10 | 32 |      |    |    |   | 1  | 6187    | 144   |
| 20 | 152  | 21 | 3  | 332  | 21 | 3  | 4 | 21 | 3845465 | 71130 |
|    |      | 10 | 32 |      |    |    |   | 1  | 6154    | 144   |
| 30 | 152  | 21 | 35 | 332  | 21 | 35 | 4 | 20 | 3851619 | 71274 |
|    |      | 10 | 32 |      |    |    |   | 2  | 6120    | 143   |
| 40 | 152  | 42 | 7  | 332  | 42 | 7  | 4 | 18 | 3857739 | 71417 |
|    |      | 10 | 32 |      |    |    |   | 1  | 6086    | 143   |
| 50 | 152  | 52 | 39 | 332  | 52 | 39 | 4 | 17 | 3863825 | 71560 |
|    |      | 10 | 33 |      |    |    |   | 1  | 6052    | 142   |
| 5  | 153  | 3  | 12 | 333  | 3  | 12 | 4 | 16 | 3869877 | 71702 |
|    |      | 10 | 33 |      |    |    |   | 1  | 6018    | 141   |
| 10 | 153  | 13 | 45 | 333  | 13 | 45 | 4 | 15 | 3875895 | 71843 |
|    |      | 10 | 33 |      |    |    |   | 2  | 5984    | 141   |
| 20 | 153  | 24 | 18 | 333  | 24 | 18 | 4 | 13 | 3881879 | 71984 |
|    |      | 10 | 34 |      |    |    |   | 1  | 5950    | 140   |
| 30 | 153  | 34 | 52 | 333  | 34 | 52 | 4 | 12 | 3887829 | 72124 |
|    |      | 10 | 34 |      |    |    |   | 1  | 5916    | 139   |
| 40 | 153  | 45 | 26 | 333  | 45 | 26 | 4 | 11 | 3893745 | 72263 |
|    |      | 10 | 34 |      |    |    |   | 2  | 5882    | 139   |
| 50 | 153  | 56 | 0  | 333  | 56 | 0  | 4 | 9  | 3899627 | 72402 |
|    |      | 10 | 34 |      |    |    |   | 1  | 5848    | 138   |
| 6  | 154  | 6  | 34 | 334  | 6  | 34 | 4 | 8  | 3905475 | 72540 |
|    |      | 10 | 35 |      |    |    |   | 1  | 5813    | 137   |



# CANON MEDIATIONVM

| in X                    |     |    |      |     |    |             |    |                                 |         |             |  |
|-------------------------|-----|----|------|-----|----|-------------|----|---------------------------------|---------|-------------|--|
| Radix ascensio-<br>num. |     |    |      |     |    | Dra.<br>Ad. |    | Numerus<br>multipli-<br>candus. |         | Dra.<br>Ad. |  |
| Par                     | /   | // | Par. | /   | // | /           | // |                                 |         |             |  |
| 6                       | 154 | 6  | 34   | 334 | 6  | 34          | 4  | 8                               | 3905475 | 72540       |  |
| 10                      | 154 | 17 | 33   | 334 | 17 | 9           | 4  | 7                               | 3911288 | 72677       |  |
|                         |     | 10 | 35   |     |    |             |    | 1                               | 5788    | 137         |  |
| 20                      | 154 | 27 | 44   | 334 | 27 | 44          | 4  | 6                               | 3917066 | 72814       |  |
|                         |     | 10 | 35   |     |    |             |    | 1                               | 5743    | 136         |  |
| 30                      | 154 | 38 | 19   | 334 | 38 | 19          | 4  | 5                               | 3922809 | 72950       |  |
|                         |     | 10 | 35   |     |    |             |    | 2                               | 5708    | 135         |  |
| 40                      | 154 | 48 | 54   | 334 | 48 | 54          | 4  | 3                               | 3928517 | 73085       |  |
|                         |     | 10 | 35   |     |    |             |    | 1                               | 5672    | 135         |  |
| 50                      | 154 | 59 | 29   | 334 | 59 | 29          | 4  | 2                               | 3934189 | 73220       |  |
|                         |     | 10 | 35   |     |    |             |    | 1                               | 5637    | 134         |  |
| 7                       | 155 | 10 | 4    | 335 | 10 | 4           | 4  | 1                               | 3939826 | 73354       |  |
|                         |     | 10 | 36   |     |    |             |    | 1                               | 5602    | 133         |  |
| 10                      | 155 | 20 | 40   | 335 | 20 | 40          | 4  | 0                               | 3945428 | 73487       |  |
|                         |     | 10 | 36   |     |    |             |    | 1                               | 5567    | 133         |  |
| 20                      | 155 | 31 | 16   | 335 | 31 | 16          | 3  | 59                              | 3950995 | 73620       |  |
|                         |     | 10 | 36   |     |    |             |    | 2                               | 5531    | 132         |  |
| 30                      | 155 | 41 | 52   | 335 | 41 | 52          | 3  | 57                              | 3956526 | 73752       |  |
|                         |     | 10 | 37   |     |    |             |    | 1                               | 5496    | 131         |  |
| 40                      | 155 | 52 | 29   | 335 | 52 | 29          | 3  | 56                              | 3962022 | 73883       |  |
|                         |     | 10 | 37   |     |    |             |    | 1                               | 5460    | 130         |  |
| 50                      | 156 | 3  | 6    | 336 | 3  | 6           | 3  | 55                              | 3967482 | 74013       |  |
|                         |     | 10 | 37   |     |    |             |    | 2                               | 5424    | 130         |  |
| 8                       | 156 | 13 | 43   | 336 | 13 | 43          | 3  | 53                              | 3972906 | 74143       |  |
|                         |     | 10 | 38   |     |    |             |    | 1                               | 5388    | 129         |  |
| 10                      | 156 | 24 | 21   | 336 | 24 | 21          | 3  | 52                              | 3978294 | 74272       |  |
|                         |     | 10 | 38   |     |    |             |    | 1                               | 5352    | 128         |  |
| 20                      | 156 | 34 | 59   | 336 | 34 | 59          | 3  | 51                              | 3983646 | 74400       |  |
|                         |     | 10 | 38   |     |    |             |    | 2                               | 5316    | 128         |  |
| 30                      | 156 | 45 | 37   | 336 | 45 | 37          | 3  | 49                              | 3988962 | 74528       |  |
|                         |     | 10 | 38   |     |    |             |    | 1                               | 5280    | 127         |  |
| 40                      | 156 | 56 | 15   | 536 | 56 | 15          | 3  | 48                              | 3994242 | 74655       |  |
|                         |     | 10 | 38   |     |    |             |    | 1                               | 5244    | 126         |  |
| 50                      | 157 | 6  | 53   | 337 | 6  | 53          | 3  | 47                              | 3999486 | 74781       |  |
|                         |     | 10 | 38   |     |    |             |    | 2                               | 5207    | 125         |  |
| 9                       | 157 | 17 | 31   | 337 | 17 | 31          | 3  | 45                              | 4004643 | 74906       |  |
|                         |     | 10 | 39   |     |    |             |    | 1                               | 5170    | 125         |  |



lip X

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multiplic. | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|-----------------------|------------|
|    | par.                    | /  | // | par. | /  | // | /          | // |                       |            |
| 9  | 157                     | 17 | 31 | 337  | 17 | 31 | 3          | 45 | 4004693               | 74906      |
| 10 | 157                     | 18 | 10 | 337  | 18 | 10 | 3          | 44 | 4009863               | 75031      |
|    |                         | 10 | 39 |      |    |    |            | 2  | 5134                  | 124        |
| 20 | 157                     | 38 | 49 | 337  | 38 | 49 | 3          | 42 | 4014997               | 75555      |
|    |                         | 10 | 39 |      |    |    |            | 1  | 5097                  | 123        |
| 30 | 157                     | 49 | 28 | 337  | 49 | 28 | 3          | 41 | 4020094               | 75278      |
|    |                         | 10 | 39 |      |    |    |            | 2  | 5060                  | 122        |
| 40 | 158                     | 0  | 7  | 338  | 0  | 7  | 3          | 39 | 4025154               | 75400      |
|    |                         | 10 | 40 |      |    |    |            | 1  | 5023                  | 121        |
| 50 | 158                     | 10 | 47 | 338  | 10 | 47 | 3          | 38 | 4030177               | 75521      |
|    |                         | 10 | 40 |      |    |    |            | 2  | 4986                  | 120        |
| 10 | 158                     | 21 | 27 | 338  | 21 | 27 | 3          | 36 | 4035163               | 75641      |
|    |                         | 10 | 40 |      |    |    |            | 1  | 4949                  | 120        |
| 10 | 158                     | 32 | 7  | 338  | 32 | 7  | 3          | 35 | 4040112               | 75761      |
|    |                         | 10 | 40 |      |    |    |            | 2  | 4912                  | 119        |
| 20 | 158                     | 42 | 47 | 338  | 42 | 47 | 3          | 33 | 4045024               | 75880      |
|    |                         | 10 | 41 |      |    |    |            | 1  | 4874                  | 118        |
| 30 | 158                     | 53 | 28 | 338  | 53 | 28 | 3          | 32 | 4049898               | 75998      |
|    |                         | 10 | 41 |      |    |    |            | 2  | 4837                  | 117        |
| 40 | 159                     | 4  | 9  | 339  | 4  | 9  | 3          | 30 | 4054735               | 76115      |
|    |                         | 10 | 41 |      |    |    |            | 1  | 4800                  | 116        |
| 50 | 159                     | 14 | 50 | 339  | 14 | 50 | 3          | 29 | 4059535               | 76231      |
|    |                         | 10 | 41 |      |    |    |            | 2  | 4763                  | 116        |
| 11 | 159                     | 25 | 31 | 339  | 25 | 31 | 3          | 27 | 4064298               | 76347      |
|    |                         | 10 | 42 |      |    |    |            | 1  | 4725                  | 115        |
| 10 | 159                     | 36 | 13 | 339  | 36 | 13 | 3          | 26 | 4069023               | 76462      |
|    |                         | 10 | 42 |      |    |    |            | 2  | 4687                  | 114        |
| 20 | 159                     | 46 | 55 | 339  | 46 | 55 | 3          | 24 | 4073710               | 76576      |
|    |                         | 10 | 42 |      |    |    |            | 1  | 4649                  | 113        |
| 30 | 159                     | 57 | 27 | 339  | 57 | 27 | 3          | 23 | 4078359               | 76689      |
|    |                         | 10 | 42 |      |    |    |            | 2  | 4611                  | 112        |
| 40 | 160                     | 8  | 19 | 340  | 8  | 19 | 3          | 21 | 4082970               | 76801      |
|    |                         | 10 | 42 |      |    |    |            | 1  | 4572                  | 111        |
| 50 | 160                     | 19 | 1  | 340  | 19 | 1  | 3          | 20 | 4087542               | 76912      |
|    |                         | 10 | 42 |      |    |    |            | 2  | 4534                  | 111        |
| 12 | 160                     | 29 | 43 | 340  | 29 | 43 | 3          | 18 | 4092076               | 77023      |
|    |                         | 10 | 43 |      |    |    |            | 1  | 4496                  | 110        |



# CANON MEDIATIONVM

III X

|     | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli-<br>candus. | Dra<br>Ad. |
|-----|-------------------------|----|----|------|----|----|------------|----|---------------------------------|------------|
|     | par.                    | /  | // | par. | /  | // | /          | // |                                 |            |
| I 2 | 160                     | 29 | 43 | 340  | 29 | 43 | 3          | 18 | 4092076                         | 77023      |
| 10  | 160                     | 40 | 26 | 340  | 40 | 26 | 3          | 17 | 4096572                         | 77133      |
|     |                         | 10 | 43 |      |    |    |            | 2  | 4457                            | 109        |
| 20  | 160                     | 51 | 9  | 340  | 51 | 9  | 3          | 15 | 4101029                         | 77242      |
|     |                         | 10 | 43 |      |    |    |            | 1  | 4419                            | 108        |
| 30  | 161                     | 1  | 52 | 341  | 1  | 52 | 3          | 14 | 4105448                         | 77350      |
|     |                         | 10 | 43 |      |    |    |            | 2  | 4381                            | 107        |
| 40  | 161                     | 12 | 35 | 341  | 12 | 35 | 3          | 12 | 4109829                         | 77457      |
|     |                         | 10 | 43 |      |    |    |            | 2  | 4343                            | 106        |
| 50  | 161                     | 23 | 18 | 341  | 23 | 18 | 3          | 10 | 4114172                         | 77563      |
|     |                         | 10 | 43 |      |    |    |            | 1  | 4304                            | 105        |
| I 3 | 161                     | 34 | 1  | 341  | 34 | 1  | 3          | 9  | 4118476                         | 77668      |
|     |                         | 10 | 44 |      |    |    |            | 2  | 4265                            | 104        |
| 10  | 161                     | 44 | 45 | 341  | 44 | 45 | 3          | 7  | 4122741                         | 77772      |
|     |                         | 10 | 44 |      |    |    |            | 1  | 4226                            | 103        |
| 20  | 161                     | 55 | 29 | 341  | 55 | 29 | 3          | 6  | 4126967                         | 77875      |
|     |                         | 10 | 44 |      |    |    |            | 2  | 4187                            | 102        |
| 30  | 162                     | 6  | 13 | 342  | 6  | 13 | 3          | 4  | 4131154                         | 77977      |
|     |                         | 10 | 44 |      |    |    |            | 2  | 4148                            | 102        |
| 40  | 162                     | 16 | 57 | 342  | 16 | 57 | 3          | 2  | 4135302                         | 78079      |
|     |                         | 10 | 44 |      |    |    |            | 1  | 4108                            | 101        |
| 50  | 262                     | 27 | 41 | 342  | 27 | 41 | 3          | 1  | 4139410                         | 78180      |
|     |                         | 10 | 45 |      |    |    |            | 2  | 4069                            | 100        |
| I 4 | 162                     | 38 | 26 | 342  | 38 | 26 | 3          | 59 | 4143479                         | 78280      |
|     |                         | 10 | 45 |      |    |    |            | 1  | 4030                            | 100        |
| 10  | 162                     | 49 | 11 | 342  | 49 | 11 | 2          | 58 | 4147509                         | 78380      |
|     |                         | 10 | 45 |      |    |    |            | 2  | 3991                            | 99         |
| 20  | 162                     | 59 | 56 | 342  | 59 | 56 | 2          | 56 | 4151500                         | 78379      |
|     |                         | 10 | 45 |      |    |    |            | 2  | 3951                            | 98         |
| 30  | 163                     | 10 | 41 | 343  | 10 | 41 | 2          | 54 | 4155451                         | 78477      |
|     |                         | 10 | 46 |      |    |    |            | 1  | 3911                            | 97         |
| 40  | 163                     | 21 | 27 | 343  | 21 | 27 | 2          | 53 | 4159362                         | 78570      |
|     |                         | 10 | 46 |      |    |    |            | 2  | 3871                            | 96         |
| 50  | 163                     | 32 | 13 | 343  | 32 | 13 | 2          | 51 | 4163233                         | 78666      |
|     |                         | 10 | 46 |      |    |    |            | 1  | 3932                            | 95         |
| I 5 | 163                     | 42 | 59 | 343  | 42 | 59 | 2          | 50 | 4167065                         | 78861      |
|     |                         | 10 | 46 |      |    |    |            | 2  | 3792                            | 94         |



11p X

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra.<br>Ad. |    | Numerus<br>multipli-<br>candus. | Dra.<br>Ad. |  |
|----|-------------------------|----|----|------|----|----|-------------|----|---------------------------------|-------------|--|
|    | Par                     | /  | // | Par. | /  | // | /           | // |                                 |             |  |
| 15 | 163                     | 42 | 59 | 343  | 42 | 59 | 2           | 50 | 4167065                         | 78861       |  |
| 10 | 164                     | 53 | 45 | 344  | 53 | 45 | 2           | 48 | 4170857                         | 78955       |  |
|    |                         | 10 | 46 |      |    |    |             | 1  | 3752                            | 93          |  |
| 20 | 164                     | 4  | 31 | 344  | 4  | 31 | 2           | 47 | 4174609                         | 79048       |  |
|    |                         | 10 | 46 |      |    |    |             | 2  | 3712                            | 92          |  |
| 30 | 164                     | 15 | 17 | 344  | 15 | 17 | 2           | 45 | 4178321                         | 79140       |  |
|    |                         | 10 | 46 |      |    |    |             | 2  | 3672                            | 91          |  |
| 40 | 164                     | 26 | 3  | 344  | 26 | 3  | 2           | 43 | 4181993                         | 79231       |  |
|    |                         | 10 | 47 |      |    |    |             | 2  | 3632                            | 90          |  |
| 50 | 164                     | 36 | 50 | 344  | 36 | 50 | 2           | 41 | 4185625                         | 79321       |  |
|    |                         | 10 | 47 |      |    |    |             | 1  | 3591                            | 89          |  |
| 16 | 164                     | 47 | 37 | 344  | 47 | 37 | 2           | 40 | 4189216                         | 79410       |  |
|    |                         | 10 | 47 |      |    |    |             | 2  | 3551                            | 88          |  |
| 10 | 164                     | 58 | 24 | 344  | 58 | 24 | 2           | 38 | 4192767                         | 79498       |  |
|    |                         | 10 | 47 |      |    |    |             | 2  | 3512                            | 87          |  |
| 20 | 165                     | 9  | 11 | 345  | 9  | 11 | 2           | 36 | 4196278                         | 79585       |  |
|    |                         | 10 | 47 |      |    |    |             | 2  | 3470                            | 86          |  |
| 30 | 165                     | 19 | 58 | 345  | 19 | 58 | 2           | 34 | 4199748                         | 79671       |  |
|    |                         | 10 | 48 |      |    |    |             | 2  | 3430                            | 85          |  |
| 40 | 165                     | 30 | 46 | 345  | 30 | 46 | 2           | 32 | 4203178                         | 79756       |  |
|    |                         | 10 | 48 |      |    |    |             | 2  | 3389                            | 84          |  |
| 50 | 165                     | 41 | 34 | 345  | 41 | 34 | 2           | 30 | 4206567                         | 79840       |  |
|    |                         | 10 | 48 |      |    |    |             | 1  | 3349                            | 83          |  |
| 17 | 165                     | 52 | 22 | 345  | 52 | 22 | 2           | 29 | 4209916                         | 79923       |  |
|    |                         | 10 | 48 |      |    |    |             | 2  | 3308                            | 82          |  |
| 10 | 166                     | 3  | 10 | 346  | 3  | 10 | 2           | 27 | 4213224                         | 80005       |  |
|    |                         | 10 | 48 |      |    |    |             | 2  | 3267                            | 81          |  |
| 20 | 166                     | 13 | 58 | 346  | 13 | 58 | 2           | 25 | 4216491                         | 80086       |  |
|    |                         | 10 | 48 |      |    |    |             | 2  | 3226                            | 80          |  |
| 30 | 166                     | 24 | 46 | 346  | 24 | 46 | 2           | 23 | 4219717                         | 80166       |  |
|    |                         | 10 | 48 |      |    |    |             | 2  | 3185                            | 80          |  |
| 40 | 166                     | 35 | 34 | 346  | 35 | 34 | 2           | 21 | 4222902                         | 80246       |  |
|    |                         | 10 | 49 |      |    |    |             | 1  | 3144                            | 79          |  |
| 50 | 116                     | 46 | 23 | 346  | 46 | 23 | 2           | 20 | 4226046                         | 80325       |  |
|    |                         | 10 | 49 |      |    |    |             | 2  | 3103                            | 78          |  |
| 18 | 166                     | 57 | 12 | 346  | 57 | 12 | 2           | 18 | 4229149                         | 80403       |  |
|    |                         | 10 | 49 |      |    |    |             | 2  | 3062                            | 77          |  |







ny X

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli- | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|----------------------|------------|
|    | par                     | /  | // | par. | /  | // | /          | // |                      |            |
|    |                         |    |    |      |    |    |            |    | candus.              |            |
| 21 | 170                     | 12 | 14 | 350  | 12 | 14 | 1          | 47 | 4277907              | 81622      |
| 10 | 170                     | 23 | 5  | 350  | 23 | 5  | 1          | 45 | 4280218              | 81680      |
|    |                         | 10 | 51 |      |    |    |            | 2  | 2269                 | 57         |
| 20 | 170                     | 33 | 56 | 350  | 33 | 56 | 1          | 43 | 4282487              | 81737      |
|    |                         | 10 | 51 |      |    |    |            | 1  | 2226                 | 56         |
| 30 | 170                     | 44 | 47 | 350  | 44 | 47 | 1          | 42 | 4284713              | 81793      |
|    |                         | 10 | 51 |      |    |    |            | 2  | 2183                 | 55         |
| 40 | 170                     | 55 | 39 | 350  | 55 | 39 | 1          | 40 | 4286896              | 81848      |
|    |                         | 10 | 52 |      |    |    |            | 2  | 2141                 | 54         |
| 50 | 171                     | 6  | 31 | 351  | 6  | 31 | 1          | 38 | 4289037              | 81902      |
|    |                         | 10 | 52 |      |    |    |            | 2  | 2098                 | 53         |
| 22 | 171                     | 17 | 23 | 351  | 17 | 23 | 1          | 36 | 4291135              | 81955      |
|    |                         | 10 | 52 |      |    |    |            | 2  | 2056                 | 52         |
| 10 | 171                     | 28 | 15 | 351  | 28 | 15 | 1          | 34 | 4293191              | 82007      |
|    |                         | 10 | 52 |      |    |    |            | 2  | 2013                 | 51         |
| 20 | 171                     | 39 | 7  | 351  | 39 | 7  | 1          | 32 | 4295304              | 82058      |
|    |                         | 10 | 52 |      |    |    |            | 2  | 1973                 | 50         |
| 30 | 171                     | 40 | 59 | 351  | 49 | 59 | 1          | 30 | 4297175              | 82108      |
|    |                         | 10 | 52 |      |    |    |            | 2  | 1928                 | 49         |
| 40 | 172                     | 0  | 51 | 352  | 0  | 51 | 1          | 28 | 4299103              | 82157      |
|    |                         | 10 | 52 |      |    |    |            | 2  | 1886                 | 48         |
| 50 | 172                     | 11 | 43 | 352  | 11 | 43 | 1          | 26 | 4300989              | 82205      |
|    |                         | 10 | 52 |      |    |    |            | 2  | 1843                 | 47         |
| 23 | 172                     | 22 | 35 | 352  | 22 | 35 | 1          | 24 | 4302832              | 82252      |
|    |                         | 10 | 52 |      |    |    |            | 2  | 1800                 | 46         |
| 10 | 172                     | 33 | 27 | 352  | 33 | 27 | 1          | 22 | 4304632              | 82298      |
|    |                         | 10 | 52 |      |    |    |            | 3  | 1758                 | 44         |
| 20 | 172                     | 44 | 19 | 352  | 44 | 19 | 1          | 19 | 4306390              | 82342      |
|    |                         | 10 | 52 |      |    |    |            | 2  | 1715                 | 43         |
| 30 | 172                     | 55 | 11 | 352  | 55 | 11 | 1          | 17 | 4308105              | 82385      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1671                 | 42         |
| 40 | 173                     | 6  | 4  | 353  | 6  | 4  | 1          | 15 | 4309776              | 82427      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1628                 | 41         |
| 50 | 173                     | 16 | 56 | 353  | 16 | 56 | 1          | 13 | 4311404              | 82468      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1585                 | 40         |
| 24 | 173                     | 27 | 49 | 353  | 27 | 49 | 1          | 11 | 4312989              | 82508      |
|    |                         | 10 | 53 |      |    |    |            | 4  | 1542                 | 39         |

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# CANON MEDIATIONVM

III X

|    | Radix ascensio-<br>num. |    |    |      |    |    | Dra<br>Ad. |    | Numerus<br>multipli- | Dra<br>Ad. |
|----|-------------------------|----|----|------|----|----|------------|----|----------------------|------------|
|    | par                     | /  | // | par. | /  | // | /          | // |                      |            |
| 24 | 173                     | 27 | 49 | 353  | 27 | 49 | 1          | 11 | 4312989              | 82508      |
| 10 | 173                     | 38 | 42 | 353  | 38 | 42 | 1          | 9  | 4314531              | 82547      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1499                 | 38         |
| 20 | 173                     | 49 | 35 | 353  | 49 | 35 | 1          | 7  | 4316030              | 82585      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1456                 | 37         |
| 30 | 174                     | 0  | 28 | 354  | 0  | 28 | 1          | 5  | 4317486              | 82622      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1413                 | 36         |
| 40 | 174                     | 11 | 21 | 354  | 11 | 21 | 1          | 3  | 4318899              | 82658      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1370                 | 35         |
| 50 | 174                     | 22 | 14 | 354  | 22 | 14 | 1          | 1  | 4320269              | 82693      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1327                 | 34         |
| 25 | 174                     | 33 | 7  | 354  | 33 | 7  | 0          | 59 | 4321596              | 82727      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1283                 | 33         |
| 10 | 174                     | 44 | 0  | 354  | 44 | 0  | 0          | 57 | 4322879              | 82760      |
|    |                         | 10 | 54 |      |    |    |            | 2  | 1240                 | 32         |
| 20 | 174                     | 54 | 54 | 354  | 54 | 54 | 0          | 55 | 4324119              | 82792      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1197                 | 31         |
| 30 | 175                     | 5  | 47 | 355  | 5  | 47 | 0          | 53 | 4325316              | 82823      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1154                 | 29         |
| 40 | 175                     | 16 | 40 | 355  | 16 | 40 | 0          |    | 4326470              | 82852      |
|    |                         | 10 | 54 |      |    |    |            | 2  | 1110                 | 28         |
| 50 | 175                     | 27 | 34 | 355  | 27 | 34 | 0          | 49 | 4327580              | 82880      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1067                 | 27         |
| 26 | 175                     | 38 | 27 | 355  | 38 | 27 | 0          | 47 | 4328647              | 82907      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 1024                 | 26         |
| 10 | 175                     | 49 | 20 | 355  | 49 | 20 | 0          | 45 | 4329671              | 82933      |
|    |                         | 10 | 54 |      |    |    |            | 2  | 980                  | 25         |
| 20 | 176                     | 0  | 14 | 356  | 0  | 14 | 0          | 43 | 4330651              | 82958      |
|    |                         | 10 | 54 |      |    |    |            | 2  | 937                  | 24         |
| 30 | 176                     | 11 | 8  | 356  | 11 | 8  | 0          | 41 | 4331588              | 82982      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 894                  | 23         |
| 40 | 176                     | 22 | 1  | 356  | 22 | 1  | 0          | 39 | 4332482              | 83005      |
|    |                         | 10 | 54 |      |    |    |            | 2  | 850                  | 21         |
| 50 | 176                     | 32 | 55 | 356  | 32 | 55 | 0          | 37 | 4333332              | 83026      |
|    |                         | 10 | 54 |      |    |    |            | 2  | 807                  | 20         |
| 27 | 176                     | 43 | 49 | 356  | 43 | 49 | 0          | 35 | 4334139              | 83046      |
|    |                         | 10 | 53 |      |    |    |            | 2  | 762                  | 19         |



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|    |     |    |    |     |    |    |   |    |         |       |
|----|-----|----|----|-----|----|----|---|----|---------|-------|
| 27 | 176 | 43 | 49 | 356 | 43 | 49 | 0 | 35 | 4334139 | 83046 |
| 10 | 176 | 54 | 42 | 356 | 54 | 42 | 0 | 33 | 4334902 | 83065 |
|    |     | 10 | 54 |     |    |    |   | 2  | 720     | 18    |
| 20 | 177 | 5  | 36 | 357 | 5  | 36 | 0 | 31 | 4335622 | 83083 |
|    |     | 10 | 54 |     |    |    |   | 2  | 678     | 17    |
| 30 | 177 | 16 | 30 | 357 | 16 | 30 | 0 | 29 | 4336298 | 83100 |
|    |     | 10 | 54 |     |    |    |   | 2  | 633     | 16    |
| 40 | 177 | 27 | 24 | 357 | 27 | 24 | 0 | 27 | 4336931 | 83116 |
|    |     | 10 | 54 |     |    |    |   | 2  | 589     | 15    |
| 50 | 177 | 38 | 18 | 357 | 38 | 18 | 0 | 25 | 4337520 | 83131 |
|    |     | 10 | 54 |     |    |    |   | 2  | 545     | 14    |
| 28 | 177 | 49 | 12 | 357 | 49 | 12 | 0 | 23 | 4338065 | 83145 |
|    |     | 10 | 54 |     |    |    |   | 2  | 502     | 13    |
| 10 | 178 | 0  | 6  | 358 | 0  | 6  | 0 | 21 | 4338567 | 83158 |
|    |     | 10 | 54 |     |    |    |   | 2  | 458     | 11    |
| 20 | 178 | 11 | 0  | 358 | 11 | 0  | 0 | 19 | 4339025 | 83169 |
|    |     | 10 | 54 |     |    |    |   | 1  | 415     | 10    |
| 30 | 178 | 21 | 54 | 358 | 21 | 54 | 0 | 18 | 4339440 | 83179 |
|    |     | 10 | 54 |     |    |    |   | 2  | 371     | 9     |
| 40 | 178 | 32 | 48 | 358 | 32 | 48 | 0 | 16 | 4339811 | 83188 |
|    |     | 10 | 54 |     |    |    |   | 2  | 327     | 8     |
| 50 | 178 | 43 | 42 | 358 | 43 | 42 | 0 | 14 | 4340138 | 83196 |
|    |     | 10 | 54 |     |    |    |   | 2  | 284     | 7     |
| 29 | 178 | 54 | 36 | 358 | 54 | 36 | 0 | 12 | 4340422 | 83203 |
|    |     | 10 | 54 |     |    |    |   | 2  | 240     | 6     |
| 10 | 179 | 5  | 30 | 359 | 5  | 30 | 0 | 10 | 4340662 | 83209 |
|    |     | 10 | 54 |     |    |    |   | 2  | 196     | 5     |
| 20 | 179 | 16 | 24 | 359 | 16 | 24 | 0 | 8  | 4340858 | 83214 |
|    |     | 10 | 54 |     |    |    |   | 2  | 153     | 4     |
| 30 | 179 | 17 | 18 | 359 | 17 | 18 | 0 | 6  | 4341011 | 83218 |
|    |     | 10 | 54 |     |    |    |   | 2  | 109     | 3     |
| 40 | 179 | 38 | 12 | 359 | 38 | 12 | 0 | 4  | 4341120 | 83221 |
|    |     | 10 | 54 |     |    |    |   | 2  | 66      | 2     |
| 50 | 179 | 49 | 6  | 359 | 49 | 6  | 0 | 2  | 4341186 | 83223 |
|    |     | 10 | 54 |     |    |    |   | 2  | 22      | 1     |
| 30 | 180 | 0  | 0  | 360 | 0  | 0  | 0 | 0  | 4341208 | 83224 |
|    |     | 10 | 54 |     |    |    |   | 0  | 00      | 0     |



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tium Signiferi, seu declinationis Eclipticæ  
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| V ♄  |   |    | Dra. |    | ♄ m |       |       | Dra.  |       | II ♀ |       |    | Dra. |    |    |
|------|---|----|------|----|-----|-------|-------|-------|-------|------|-------|----|------|----|----|
| par  | / | // | /    | // | /   | //    |       | /     | //    | /    | //    |    | /    | // |    |
| 0    | 0 | 0  | 0    | 0  | 0   | 0     | 11 29 | 5     | 11 13 | 20   | 10    | 25 | 20   | 18 | 30 |
| 10   | 0 | 3  | 59   | 0  | 4   | 11 32 | 36    | 11 16 | 20 12 | 32   | 20 21 | 50 |      |    |    |
| 20   | 0 | 7  | 58   | 0  | 8   | 11 36 | 7     | 11 20 | 20 14 | 38   | 20 23 | 40 |      |    |    |
| 30   | 0 | 11 | 57   | 0  | 12  | 11 39 | 37    | 11 23 | 20 16 | 44   | 20 25 | 30 |      |    |    |
| 40   | 0 | 15 | 55   | 0  | 15  | 11 43 | 7     | 11 27 | 20 18 | 49   | 20 28 | 20 |      |    |    |
| 50   | 0 | 19 | 54   | 0  | 19  | 11 46 | 37    | 11 30 | 20 20 | 53   | 20 30 | 10 |      |    |    |
| 1    | 0 | 23 | 53   | 0  | 23  | 11 50 | 6     | 11 34 | 20 22 | 57   | 20 32 | 29 |      |    |    |
| 10   | 0 | 27 | 52   | 0  | 27  | 11 53 | 35    | 11 37 | 20 25 | 0    | 20 34 | 50 |      |    |    |
| 20   | 0 | 31 | 51   | 0  | 31  | 11 47 | 4     | 11 41 | 20 27 | 3    | 20 37 | 40 |      |    |    |
| 30   | 0 | 35 | 49   | 0  | 35  | 12 0  | 32    | 11 45 | 20 29 | 5    | 20 39 | 30 |      |    |    |
| 40   | 0 | 39 | 48   | 0  | 38  | 12 4  | 0     | 11 48 | 20 31 | 6    | 20 41 | 20 |      |    |    |
| 50   | 0 | 43 | 47   | 0  | 42  | 12 7  | 28    | 11 52 | 20 33 | 7    | 20 43 | 10 |      |    |    |
| 2    | 0 | 47 | 46   | 0  | 46  | 12 10 | 56    | 11 55 | 20 35 | 7    | 20 45 | 28 |      |    |    |
| 10   | 0 | 51 | 45   | 0  | 50  | 12 14 | 23    | 11 59 | 20 37 | 6    | 20 47 | 50 |      |    |    |
| 20   | 0 | 55 | 43   | 0  | 54  | 12 17 | 50    | 11 2  | 20 39 | 5    | 20 49 | 40 |      |    |    |
| 30   | 0 | 59 | 42   | 0  | 57  | 12 21 | 16    | 12 6  | 20 41 | 3    | 20 52 | 30 |      |    |    |
| 40   | 1 | 3  | 41   | 1  | 1   | 12 24 | 42    | 12 9  | 20 43 | 1    | 20 54 | 20 |      |    |    |
| 50   | 1 | 7  | 40   | 1  | 5   | 12 28 | 8     | 12 13 | 20 44 | 58   | 20 56 | 10 |      |    |    |
| 3    | 1 | 11 | 39   | 1  | 9   | 12 31 | 34    | 12 16 | 20 46 | 55   | 20 58 | 27 |      |    |    |
| 10   | 1 | 15 | 37   | 1  | 13  | 12 34 | 59    | 12 20 | 20 48 | 51   | 21 0  | 50 |      |    |    |
| 20   | 1 | 19 | 36   | 1  | 17  | 12 38 | 24    | 12 23 | 20 50 | 46   | 21 2  | 40 |      |    |    |
| 30   | 1 | 23 | 35   | 1  | 20  | 12 41 | 48    | 12 27 | 20 52 | 40   | 21 5  | 30 |      |    |    |
| 40   | 1 | 27 | 33   | 1  | 24  | 12 45 | 12    | 12 30 | 20 54 | 34   | 21 7  | 20 |      |    |    |
| 50   | 1 | 31 | 32   | 1  | 28  | 12 48 | 36    | 12 34 | 20 56 | 27   | 21 9  | 10 |      |    |    |
| 4    | 1 | 35 | 30   | 1  | 32  | 12 51 | 59    | 12 37 | 20 58 | 20   | 21 11 | 26 |      |    |    |
| 10   | 1 | 39 | 29   | 1  | 36  | 12 55 | 22    | 12 41 | 21 0  | 12   | 21 13 | 50 |      |    |    |
| 20   | 1 | 43 | 27   | 1  | 39  | 12 58 | 45    | 12 44 | 21 2  | 3    | 21 15 | 40 |      |    |    |
| 30   | 1 | 47 | 26   | 1  | 43  | 13 2  | 7     | 12 48 | 21 3  | 54   | 21 17 | 30 |      |    |    |
| 40   | 1 | 51 | 24   | 1  | 47  | 13 5  | 29    | 12 51 | 21 5  | 44   | 21 19 | 20 |      |    |    |
| 50   | 1 | 55 | 22   | 1  | 51  | 13 8  | 51    | 12 54 | 21 7  | 33   | 21 21 | 10 |      |    |    |
| 5    | 1 | 59 | 20   | 1  | 55  | 13 12 | 12    | 12 57 | 21 9  | 21   | 21 23 | 25 |      |    |    |
| 10   | 2 | 3  | 18   | 1  | 59  | 13 15 | 33    | 13 1  | 21 11 | 9    | 21 25 | 50 |      |    |    |
| 20   | 2 | 7  | 16   | 2  | 2   | 13 18 | 54    | 13 4  | 21 12 | 56   | 21 27 | 40 |      |    |    |
| 30   | 2 | 11 | 14   | 2  | 6   | 13 22 | 14    | 13 8  | 21 14 | 43   | 21 29 | 30 |      |    |    |
| 40   | 2 | 15 | 12   | 2  | 10  | 13 25 | 34    | 13 11 | 21 16 | 29   | 21 31 | 20 |      |    |    |
| 50   | 2 | 19 | 10   | 2  | 14  | 13 28 | 53    | 13 15 | 21 18 | 14   | 21 33 | 10 |      |    |    |
| 6    | 2 | 23 | 8    | 2  | 18  | 13 32 | 12    | 13 18 | 21 19 | 59   | 21 35 | 24 |      |    |    |
| X ny |   |    | Adde |    | ♄ ♄ |       |       | Adde  |       | ♂ ♄  |       |    | Adde |    |    |



# CANON OBLIQUA. SEV DECLINA.

| V    |         | Dra. |          | Dra.  |          | Dra.  |    | Dra. |  |
|------|---------|------|----------|-------|----------|-------|----|------|--|
| par  |         | Par. |          | Par.  |          | Par.  |    | Par. |  |
| 6    | 2 23 8  | 2 18 | 13 32 12 | 13 18 | 21 19 59 | 21 35 | 24 |      |  |
| 10   | 2 27 6  | 2 22 | 13 35 30 | 13 22 | 21 21 43 | 21 37 |    |      |  |
| 20   | 2 31 4  | 2 25 | 13 38 48 | 13 25 | 21 23 26 | 21 39 |    |      |  |
| 30   | 2 35 2  | 2 29 | 13 42 6  | 13 28 | 21 25 9  | 21 41 |    |      |  |
| 40   | 2 39 0  | 2 33 | 13 45 24 | 13 32 | 21 26 51 | 21 43 |    |      |  |
| 50   | 2 42 57 | 2 37 | 13 48 41 | 13 35 | 21 28 32 | 21 45 |    |      |  |
| 7    | 2 46 54 | 2 41 | 13 51 58 | 13 38 | 21 30 13 | 21 46 | 23 |      |  |
| 10   | 2 50 52 | 2 45 | 13 55 14 | 13 42 | 21 31 53 | 21 48 |    |      |  |
| 20   | 2 54 49 | 2 48 | 13 58 30 | 13 45 | 21 33 33 | 21 50 |    |      |  |
| 30   | 2 58 46 | 2 52 | 14 1 56  | 13 48 | 21 35 12 | 21 52 |    |      |  |
| 40   | 3 2 43  | 2 56 | 14 5 1   | 13 52 | 21 36 50 | 21 54 |    |      |  |
| 50   | 3 6 40  | 3 0  | 14 8 16  | 13 55 | 21 38 27 | 21 56 |    |      |  |
| 8    | 3 10 37 | 3 4  | 14 11 30 | 13 58 | 21 40 3  | 21 58 | 22 |      |  |
| 10   | 3 14 34 | 3 8  | 14 14 44 | 14 2  | 21 41 39 | 21 59 |    |      |  |
| 20   | 3 18 31 | 3 11 | 14 17 57 | 14 5  | 21 43 14 | 22 1  |    |      |  |
| 30   | 3 22 28 | 3 15 | 14 21 10 | 14 8  | 21 44 49 | 22 3  |    |      |  |
| 40   | 3 26 25 | 3 19 | 14 24 23 | 14 12 | 21 46 23 | 22 5  |    |      |  |
| 50   | 3 30 21 | 3 23 | 14 27 36 | 14 15 | 21 47 56 | 22 7  |    |      |  |
| 9    | 3 34 18 | 3 27 | 14 30 48 | 14 18 | 21 49 29 | 22 8  | 21 |      |  |
| 10   | 3 38 14 | 3 31 | 14 34 0  | 14 21 | 21 51 1  | 22 10 |    |      |  |
| 20   | 3 42 10 | 3 34 | 14 37 11 | 14 25 | 21 52 32 | 22 12 |    |      |  |
| 30   | 3 46 6  | 3 38 | 14 40 22 | 14 28 | 21 54 2  | 22 13 |    |      |  |
| 40   | 3 50 2  | 3 42 | 14 43 32 | 14 31 | 21 55 32 | 22 15 |    |      |  |
| 50   | 3 53 58 | 3 46 | 14 46 42 | 14 34 | 21 57 1  | 22 17 |    |      |  |
| 10   | 3 57 54 | 3 50 | 14 49 51 | 14 37 | 21 58 29 | 22 18 | 20 |      |  |
| 10   | 4 1 50  | 3 53 | 14 53 0  | 14 40 | 21 59 57 | 22 20 |    |      |  |
| 20   | 4 5 46  | 3 57 | 14 56 9  | 14 44 | 22 1 24  | 22 21 |    |      |  |
| 30   | 4 9 42  | 4 1  | 14 59 17 | 14 47 | 22 2 51  | 22 23 |    |      |  |
| 40   | 4 13 37 | 4 5  | 15 2 25  | 14 50 | 22 4 17  | 22 25 |    |      |  |
| 50   | 4 17 33 | 4 9  | 15 5 33  | 14 53 | 22 5 42  | 22 26 |    |      |  |
| 11   | 4 21 28 | 4 12 | 15 8 40  | 14 57 | 22 7 6   | 22 28 | 19 |      |  |
| 10   | 4 25 23 | 4 16 | 15 11 47 | 15 0  | 22 8 30  | 22 29 |    |      |  |
| 20   | 4 29 18 | 4 19 | 15 14 53 | 15 3  | 22 9 53  | 22 31 |    |      |  |
| 30   | 4 33 13 | 4 23 | 15 17 59 | 15 7  | 22 11 15 | 22 33 |    |      |  |
| 40   | 4 37 8  | 4 27 | 15 21 4  | 15 10 | 22 12 36 | 22 34 |    |      |  |
| 50   | 4 41 3  | 4 31 | 15 24 9  | 15 13 | 22 13 57 | 22 36 |    |      |  |
| 12   | 4 44 57 | 4 35 | 15 27 13 | 15 16 | 22 15 17 | 22 37 | 18 |      |  |
| X ny |         | Adde | Ω        |       | Adde     | b 6   |    | Adde |  |



| V   |   |    | Dra. |    |    | 8   |    |    | Dra. |    |    | H   |    |    | Dra. |    |  |
|-----|---|----|------|----|----|-----|----|----|------|----|----|-----|----|----|------|----|--|
| par | / | // | /    | // |    | par | /  | // | /    | // |    | par | /  | // | /    | // |  |
| 12  | 4 | 44 | 57   | 4  | 35 | 15  | 27 | 13 | 15   | 16 | 22 | 15  | 17 | 22 | 37   | 18 |  |
| 10  | 4 | 48 | 52   | 4  | 39 | 15  | 30 | 17 | 15   | 19 | 22 | 16  | 36 | 22 | 39   | 50 |  |
| 20  | 4 | 52 | 46   | 4  | 43 | 15  | 33 | 20 | 15   | 22 | 22 | 17  | 55 | 22 | 40   | 40 |  |
| 30  | 4 | 56 | 40   | 4  | 46 | 15  | 36 | 23 | 15   | 25 | 22 | 19  | 13 | 22 | 42   | 30 |  |
| 40  | 5 | 0  | 34   | 4  | 50 | 15  | 39 | 26 | 15   | 29 | 22 | 20  | 30 | 22 | 43   | 20 |  |
| 50  | 5 | 4  | 28   | 4  | 54 | 15  | 42 | 28 | 15   | 32 | 22 | 21  | 47 | 22 | 45   | 10 |  |
| 13  | 5 | 8  | 12   | 4  | 58 | 15  | 45 | 30 | 15   | 35 | 22 | 23  | 3  | 22 | 46   | 17 |  |
| 10  | 5 | 12 | 16   | 5  | 2  | 15  | 48 | 31 | 15   | 38 | 22 | 24  | 18 | 22 | 48   | 50 |  |
| 20  | 5 | 16 | 10   | 5  | 5  | 15  | 51 | 32 | 15   | 41 | 22 | 25  | 32 | 22 | 49   | 40 |  |
| 30  | 5 | 20 | 3    | 5  | 9  | 15  | 54 | 33 | 15   | 45 | 22 | 26  | 46 | 22 | 50   | 30 |  |
| 40  | 5 | 23 | 56   | 5  | 13 | 15  | 57 | 33 | 15   | 48 | 22 | 27  | 59 | 22 | 52   | 20 |  |
| 50  | 5 | 27 | 49   | 5  | 17 | 16  | 0  | 33 | 15   | 51 | 22 | 29  | 12 | 22 | 53   | 10 |  |
| 14  | 5 | 31 | 42   | 5  | 21 | 16  | 3  | 32 | 15   | 54 | 22 | 30  | 24 | 22 | 54   | 16 |  |
| 10  | 5 | 35 | 35   | 5  | 24 | 16  | 6  | 31 | 15   | 57 | 22 | 31  | 35 | 22 | 56   | 50 |  |
| 20  | 5 | 39 | 28   | 5  | 28 | 16  | 9  | 29 | 16   | 1  | 22 | 32  | 45 | 22 | 57   | 40 |  |
| 30  | 5 | 43 | 21   | 5  | 32 | 16  | 12 | 27 | 16   | 4  | 22 | 33  | 55 | 22 | 58   | 30 |  |
| 40  | 5 | 47 | 13   | 5  | 36 | 16  | 15 | 24 | 16   | 7  | 22 | 35  | 4  | 23 | 0    | 20 |  |
| 50  | 5 | 51 | 5    | 5  | 40 | 16  | 18 | 21 | 16   | 10 | 22 | 36  | 12 | 23 | 1    | 10 |  |
| 15  | 5 | 54 | 57   | 5  | 43 | 16  | 21 | 17 | 16   | 13 | 22 | 37  | 19 | 23 | 2    | 15 |  |
| 10  | 5 | 58 | 49   | 5  | 47 | 16  | 24 | 13 | 16   | 16 | 22 | 38  | 26 | 23 | 3    | 50 |  |
| 20  | 6 | 2  | 41   | 5  | 51 | 16  | 27 | 8  | 16   | 19 | 22 | 39  | 32 | 23 | 5    | 40 |  |
| 30  | 6 | 6  | 33   | 5  | 54 | 16  | 30 | 3  | 16   | 22 | 22 | 40  | 37 | 23 | 6    | 30 |  |
| 40  | 6 | 10 | 24   | 5  | 58 | 16  | 32 | 57 | 16   | 25 | 22 | 41  | 41 | 23 | 7    | 20 |  |
| 50  | 6 | 14 | 15   | 6  | 2  | 16  | 35 | 51 | 16   | 28 | 22 | 42  | 45 | 23 | 8    | 10 |  |
| 16  | 6 | 18 | 6    | 6  | 6  | 16  | 38 | 44 | 16   | 31 | 22 | 43  | 48 | 23 | 9    | 14 |  |
| 10  | 6 | 21 | 57   | 6  | 10 | 16  | 41 | 37 | 16   | 34 | 22 | 44  | 50 | 23 | 10   | 50 |  |
| 20  | 6 | 25 | 28   | 6  | 14 | 16  | 44 | 29 | 16   | 37 | 22 | 45  | 51 | 23 | 11   | 40 |  |
| 30  | 6 | 29 | 39   | 6  | 17 | 16  | 47 | 21 | 16   | 40 | 22 | 46  | 52 | 23 | 13   | 30 |  |
| 40  | 6 | 33 | 29   | 6  | 21 | 16  | 50 | 13 | 16   | 43 | 22 | 47  | 52 | 23 | 14   | 20 |  |
| 50  | 6 | 37 | 19   | 6  | 25 | 16  | 53 | 4  | 16   | 46 | 22 | 48  | 51 | 23 | 15   | 10 |  |
| 17  | 6 | 41 | 9    | 6  | 28 | 16  | 55 | 55 | 16   | 49 | 22 | 49  | 50 | 23 | 16   | 13 |  |
| 10  | 6 | 44 | 59   | 6  | 32 | 16  | 53 | 46 | 16   | 52 | 22 | 50  | 48 | 23 | 17   | 50 |  |
| 20  | 6 | 48 | 49   | 6  | 36 | 17  | 1  | 36 | 16   | 55 | 22 | 51  | 45 | 23 | 18   | 40 |  |
| 30  | 6 | 52 | 39   | 6  | 39 | 17  | 4  | 25 | 16   | 58 | 22 | 52  | 41 | 23 | 20   | 30 |  |
| 40  | 6 | 56 | 28   | 6  | 43 | 17  | 7  | 13 | 17   | 1  | 22 | 53  | 37 | 23 | 21   | 20 |  |
| 50  | 7 | 0  | 17   | 6  | 47 | 17  | 10 | 1  | 17   | 4  | 22 | 54  | 32 | 23 | 22   | 10 |  |
| 18  | 7 | 4  | 6    | 6  | 51 | 17  | 12 | 48 | 17   | 7  | 22 | 55  | 27 | 23 | 23   | 12 |  |
| X m |   |    | Adde |    |    | = S |    |    | Adde |    |    | b 6 |    |    | Adde |    |  |



# CANON OBLIQUATIONIS PARTIVM

|    | V    | ♌  | Dra. | ♍ | ♎    | Dra. | ♏    | ♐  | Dra. |    |      |    |    |    |    |    |
|----|------|----|------|---|------|------|------|----|------|----|------|----|----|----|----|----|
| 18 | 7    | 4  | 6    | 6 | 51   | 17   | 12   | 48 | 17   | 7  | 22   | 55 | 27 | 23 | 23 | 12 |
| 10 | 7    | 7  | 55   | 6 | 55   | 17   | 15   | 35 | 17   | 10 | 22   | 56 | 21 | 23 | 24 | 50 |
| 20 | 7    | 11 | 44   | 6 | 58   | 17   | 18   | 21 | 17   | 13 | 22   | 57 | 14 | 23 | 25 | 40 |
| 30 | 7    | 15 | 32   | 7 | 2    | 17   | 21   | 7  | 17   | 16 | 22   | 58 | 6  | 26 | 26 | 30 |
| 40 | 7    | 19 | 21   | 7 | 6    | 17   | 23   | 53 | 17   | 19 | 22   | 58 | 57 | 23 | 27 | 20 |
| 50 | 7    | 23 | 9    | 7 | 10   | 17   | 26   | 38 | 17   | 22 | 22   | 59 | 48 | 23 | 28 | 10 |
| 19 | 7    | 26 | 57   | 7 | 13   | 17   | 29   | 23 | 17   | 25 | 23   | 0  | 38 | 23 | 29 | II |
| 10 | 7    | 30 | 45   | 7 | 17   | 17   | 32   | 7  | 17   | 28 | 23   | 1  | 27 | 23 | 30 | 50 |
| 20 | 7    | 34 | 32   | 7 | 21   | 17   | 34   | 51 | 17   | 30 | 23   | 2  | 16 | 23 | 31 | 40 |
| 30 | 7    | 38 | 19   | 7 | 24   | 17   | 37   | 34 | 17   | 33 | 23   | 3  | 4  | 23 | 32 | 30 |
| 40 | 7    | 42 | 6    | 7 | 28   | 17   | 40   | 17 | 17   | 36 | 23   | 3  | 51 | 23 | 33 | 20 |
| 50 | 7    | 45 | 53   | 7 | 32   | 17   | 42   | 59 | 17   | 39 | 23   | 4  | 37 | 23 | 34 | 10 |
| 20 | 7    | 49 | 40   | 7 | 35   | 17   | 45   | 40 | 17   | 42 | 23   | 5  | 22 | 23 | 34 | IC |
| 10 | 7    | 53 | 26   | 7 | 39   | 17   | 48   | 21 | 17   | 45 | 23   | 6  | 7  | 23 | 35 | 50 |
| 20 | 7    | 57 | 12   | 7 | 43   | 17   | 51   | 1  | 17   | 48 | 23   | 6  | 51 | 23 | 36 | 40 |
| 30 | 8    | 0  | 58   | 7 | 47   | 17   | 53   | 41 | 17   | 50 | 23   | 7  | 34 | 23 | 37 | 30 |
| 40 | 8    | 4  | 44   | 7 | 51   | 17   | 56   | 21 | 17   | 53 | 23   | 8  | 16 | 23 | 38 | 20 |
| 50 | 8    | 8  | 30   | 7 | 54   | 17   | 59   | 0  | 17   | 56 | 23   | 8  | 58 | 23 | 38 | 10 |
| 21 | 8    | 12 | 16   | 7 | 58   | 18   | 1    | 39 | 17   | 59 | 23   | 9  | 39 | 23 | 39 | 9  |
| 10 | 8    | 16 | 1    | 8 | 2    | 18   | 4    | 17 | 18   | 2  | 23   | 10 | 19 | 23 | 40 | 50 |
| 20 | 8    | 19 | 46   | 8 | 6    | 18   | 6    | 55 | 18   | 5  | 23   | 10 | 58 | 23 | 40 | 40 |
| 30 | 8    | 23 | 31   | 8 | 9    | 18   | 9    | 32 | 18   | 7  | 23   | 11 | 37 | 23 | 41 | 30 |
| 40 | 8    | 27 | 16   | 8 | 13   | 18   | 12   | 8  | 18   | 10 | 23   | 12 | 15 | 23 | 42 | 20 |
| 50 | 8    | 31 | 0    | 8 | 17   | 18   | 14   | 43 | 18   | 13 | 23   | 12 | 52 | 23 | 43 | 10 |
| 22 | 8    | 34 | 45   | 8 | 20   | 18   | 17   | 18 | 18   | 16 | 23   | 13 | 29 | 23 | 43 | 8  |
| 10 | 8    | 38 | 29   | 8 | 24   | 18   | 19   | 52 | 18   | 18 | 23   | 14 | 5  | 23 | 44 | 50 |
| 20 | 8    | 42 | 13   | 8 | 27   | 18   | 22   | 26 | 18   | 21 | 23   | 14 | 40 | 23 | 45 | 40 |
| 30 | 8    | 45 | 56   | 8 | 31   | 18   | 24   | 59 | 18   | 24 | 23   | 15 | 14 | 23 | 45 | 30 |
| 40 | 8    | 49 | 39   | 8 | 35   | 18   | 27   | 32 | 18   | 27 | 23   | 15 | 48 | 23 | 46 | 20 |
| 50 | 8    | 53 | 22   | 8 | 39   | 18   | 30   | 5  | 18   | 29 | 23   | 16 | 21 | 23 | 47 | 10 |
| 23 | 8    | 57 | 5    | 8 | 42   | 18   | 32   | 37 | 18   | 32 | 23   | 16 | 53 | 23 | 47 | 7  |
| 10 | 9    | 0  | 47   | 8 | 46   | 18   | 35   | 9  | 18   | 35 | 23   | 17 | 24 | 23 | 48 | 50 |
| 20 | 9    | 4  | 29   | 8 | 50   | 18   | 37   | 40 | 18   | 37 | 23   | 17 | 54 | 23 | 48 | 40 |
| 30 | 9    | 8  | 11   | 8 | 53   | 18   | 40   | 10 | 18   | 40 | 23   | 18 | 23 | 23 | 49 | 30 |
| 40 | 9    | 11 | 53   | 8 | 57   | 18   | 42   | 40 | 18   | 43 | 23   | 18 | 53 | 23 | 50 | 20 |
| 50 | 9    | 15 | 35   | 9 | 1    | 18   | 45   | 9  | 18   | 45 | 23   | 19 | 22 | 23 | 50 | 10 |
| 24 | 9    | 19 | 16   | 9 | 4    | 18   | 47   | 38 | 18   | 48 | 23   | 19 | 50 | 23 | 51 | 6  |
|    | X np |    | Adde |   | np ♏ |      | Adde |    | b ♏  |    | Adde |    |    |    |    |    |



| V ♌ |    |    | Dra. |    |    | ♋ m |    |    | Dra. |    |    | II ♈ |    |    | Dra. |    |  |
|-----|----|----|------|----|----|-----|----|----|------|----|----|------|----|----|------|----|--|
| par | /  | // | /    | // |    | par | /  | // | /    | // |    | par  | /  | // | /    | // |  |
| 24  | 9  | 19 | 16   | 9  | 4  | 18  | 47 | 38 | 18   | 48 | 23 | 19   | 50 | 23 | 51   | 6  |  |
| 10  | 9  | 22 | 57   | 9  | 8  | 18  | 50 | 6  | 18   | 51 | 23 | 20   | 17 | 23 | 51   | 50 |  |
| 20  | 9  | 26 | 38   | 9  | 12 | 18  | 52 | 33 | 18   | 53 | 23 | 20   | 43 | 23 | 52   | 40 |  |
| 30  | 9  | 30 | 19   | 9  | 15 | 18  | 55 | 0  | 18   | 56 | 23 | 21   | 8  | 23 | 52   | 30 |  |
| 40  | 9  | 33 | 59   | 9  | 19 | 18  | 57 | 26 | 18   | 59 | 23 | 21   | 32 | 23 | 52   | 20 |  |
| 50  | 9  | 37 | 39   | 9  | 23 | 18  | 59 | 52 | 19   | 1  | 23 | 21   | 56 | 23 | 53   | 10 |  |
| 25  | 9  | 41 | 19   | 9  | 26 | 19  | 2  | 18 | 19   | 4  | 23 | 22   | 19 | 23 | 53   | 5  |  |
| 10  | 9  | 44 | 58   | 9  | 30 | 19  | 4  | 43 | 19   | 6  | 23 | 22   | 41 | 23 | 54   | 50 |  |
| 20  | 9  | 48 | 37   | 9  | 33 | 19  | 7  | 7  | 19   | 9  | 23 | 23   | 3  | 23 | 54   | 40 |  |
| 30  | 9  | 52 | 16   | 9  | 37 | 19  | 9  | 31 | 19   | 12 | 23 | 23   | 24 | 23 | 55   | 30 |  |
| 40  | 9  | 55 | 55   | 9  | 41 | 19  | 11 | 54 | 19   | 14 | 23 | 23   | 44 | 23 | 55   | 20 |  |
| 50  | 9  | 59 | 34   | 9  | 44 | 19  | 14 | 16 | 19   | 17 | 23 | 24   | 3  | 23 | 56   | 10 |  |
| 26  | 10 | 3  | 12   | 9  | 47 | 19  | 16 | 37 | 19   | 19 | 23 | 24   | 22 | 23 | 56   | 4  |  |
| 10  | 10 | 6  | 50   | 9  | 51 | 19  | 18 | 58 | 19   | 22 | 23 | 24   | 40 | 23 | 56   | 50 |  |
| 20  | 10 | 10 | 28   | 9  | 55 | 19  | 21 | 18 | 19   | 24 | 23 | 24   | 57 | 23 | 57   | 40 |  |
| 30  | 10 | 14 | 5    | 9  | 59 | 19  | 23 | 38 | 19   | 27 | 23 | 25   | 13 | 23 | 57   | 30 |  |
| 40  | 10 | 17 | 42   | 10 | 2  | 19  | 25 | 58 | 19   | 30 | 23 | 25   | 28 | 23 | 57   | 20 |  |
| 50  | 10 | 21 | 19   | 10 | 6  | 19  | 28 | 17 | 19   | 32 | 23 | 25   | 43 | 23 | 57   | 10 |  |
| 27  | 10 | 24 | 56   | 10 | 9  | 19  | 30 | 36 | 19   | 35 | 23 | 25   | 57 | 23 | 58   | 3  |  |
| 10  | 10 | 28 | 32   | 10 | 13 | 19  | 32 | 54 | 19   | 38 | 23 | 26   | 10 | 23 | 58   | 50 |  |
| 20  | 10 | 32 | 8    | 10 | 16 | 19  | 35 | 11 | 19   | 40 | 23 | 26   | 23 | 23 | 58   | 40 |  |
| 30  | 10 | 35 | 44   | 10 | 19 | 19  | 37 | 28 | 19   | 43 | 23 | 26   | 35 | 35 | 58   | 30 |  |
| 40  | 10 | 39 | 20   | 10 | 23 | 19  | 39 | 44 | 19   | 45 | 23 | 26   | 46 | 23 | 59   | 20 |  |
| 50  | 10 | 42 | 55   | 10 | 27 | 19  | 41 | 59 | 19   | 48 | 23 | 26   | 56 | 23 | 59   | 10 |  |
| 28  | 10 | 46 | 30   | 10 | 30 | 19  | 44 | 14 | 19   | 50 | 23 | 27   | 5  | 23 | 59   | 2  |  |
| 10  | 10 | 50 | 4    | 10 | 34 | 19  | 46 | 28 | 19   | 53 | 23 | 27   | 14 | 23 | 59   | 50 |  |
| 20  | 10 | 53 | 38   | 10 | 37 | 19  | 48 | 42 | 19   | 55 | 23 | 27   | 22 | 23 | 59   | 40 |  |
| 30  | 10 | 57 | 12   | 10 | 41 | 19  | 50 | 55 | 19   | 57 | 23 | 27   | 29 | 23 | 59   | 30 |  |
| 40  | 11 | 0  | 46   | 10 | 45 | 19  | 53 | 7  | 20   | 0  | 23 | 27   | 35 | 23 | 59   | 20 |  |
| 50  | 11 | 4  | 20   | 10 | 48 | 19  | 55 | 19 | 20   | 2  | 23 | 27   | 41 | 23 | 59   | 10 |  |
| 29  | 11 | 7  | 53   | 10 | 52 | 19  | 57 | 30 | 20   | 4  | 23 | 27   | 46 | 24 | 0    | 1  |  |
| 10  | 11 | 11 | 26   | 10 | 55 | 19  | 59 | 41 | 20   | 7  | 23 | 27   | 50 | 24 | 0    | 50 |  |
| 20  | 11 | 14 | 58   | 10 | 59 | 20  | 1  | 51 | 20   | 9  | 23 | 27   | 53 | 24 | 0    | 40 |  |
| 30  | 11 | 18 | 30   | 11 | 2  | 20  | 4  | 0  | 20   | 10 | 23 | 27   | 56 | 24 | 0    | 30 |  |
| 40  | 11 | 22 | 2    | 11 | 6  | 20  | 6  | 9  | 20   | 14 | 23 | 27   | 58 | 24 | 0    | 20 |  |
| 50  | 11 | 25 | 34   | 11 | 9  | 20  | 8  | 17 | 20   | 16 | 23 | 27   | 59 | 24 | 0    | 10 |  |
| 30  | 11 | 29 | 5    | 11 | 13 | 20  | 10 | 25 | 20   | 18 | 23 | 28   | 0  | 24 | 0    | 0  |  |
| X m |    |    | Adde |    |    | ♋   |    |    | Adde |    |    | ♈    |    |    | Adde |    |  |



**CANON ASCEN-**  
**SIONVM SIVE ORTVVM**  
*in Sphaera recta,*



| Gr.  | V    |    |    |   | Dra. |  | Gr.  | 8    |    |    |   | Dra. |  |
|------|------|----|----|---|------|--|------|------|----|----|---|------|--|
| scr. | tem. | /  | // | / | //   |  | scr. | tem. | /  | // | / | //   |  |
| 0    | 0    | 0  | 0  | 0 | 0    |  | 6    | 5    | 30 | 25 | 1 | 0    |  |
| 10   | 0    | 9  | 10 | 0 | 2    |  | 10   | 5    | 39 | 36 | 1 | 2    |  |
| 20   | 0    | 18 | 20 | 0 | 4    |  | 20   | 5    | 48 | 48 | 1 | 4    |  |
| 30   | 0    | 27 | 31 | 0 | 5    |  | 30   | 5    | 57 | 59 | 1 | 5    |  |
| 40   | 0    | 36 | 41 | 0 | 7    |  | 40   | 6    | 7  | 11 | 1 | 7    |  |
| 50   | 0    | 45 | 51 | 0 | 9    |  | 50   | 6    | 16 | 22 | 1 | 9    |  |
| 1    | 0    | 55 | 2  | 0 | 10   |  | 7    | 6    | 25 | 34 | 1 | 10   |  |
| 10   | 1    | 4  | 12 | 0 | 12   |  | 10   | 6    | 34 | 46 | 1 | 12   |  |
| 20   | 1    | 13 | 22 | 0 | 14   |  | 20   | 6    | 43 | 58 | 1 | 14   |  |
| 30   | 1    | 22 | 33 | 0 | 15   |  | 30   | 6    | 53 | 9  | 1 | 15   |  |
| 40   | 1    | 31 | 43 | 0 | 17   |  | 40   | 7    | 2  | 21 | 1 | 17   |  |
| 50   | 1    | 50 | 54 | 0 | 19   |  | 50   | 7    | 11 | 33 | 1 | 19   |  |
| 2    | 1    | 50 | 5  | 0 | 20   |  | 8    | 7    | 20 | 45 | 1 | 20   |  |
| 10   | 1    | 59 | 15 | 0 | 22   |  | 10   | 7    | 29 | 57 | 1 | 22   |  |
| 20   | 2    | 8  | 26 | 0 | 24   |  | 20   | 7    | 39 | 9  | 1 | 24   |  |
| 30   | 2    | 17 | 36 | 0 | 25   |  | 30   | 7    | 48 | 22 | 1 | 25   |  |
| 40   | 2    | 26 | 47 | 0 | 27   |  | 40   | 7    | 57 | 34 | 1 | 27   |  |
| 50   | 2    | 35 | 57 | 0 | 29   |  | 50   | 8    | 6  | 46 | 1 | 29   |  |
| 3    | 2    | 45 | 8  | 0 | 30   |  | 9    | 8    | 15 | 59 | 1 | 30   |  |
| 10   | 2    | 54 | 18 | 0 | 32   |  | 10   | 8    | 25 | 12 | 1 | 32   |  |
| 20   | 3    | 3  | 29 | 0 | 34   |  | 20   | 8    | 34 | 24 | 1 | 33   |  |
| 30   | 3    | 12 | 40 | 6 | 35   |  | 30   | 8    | 43 | 37 | 1 | 35   |  |
| 40   | 3    | 21 | 51 | 0 | 37   |  | 40   | 8    | 52 | 50 | 1 | 37   |  |
| 50   | 3    | 31 | 2  | 0 | 39   |  | 50   | 9    | 2  | 2  | 1 | 38   |  |
| 4    | 3    | 40 | 13 | 0 | 40   |  | 10   | 9    | 11 | 15 | 1 | 40   |  |
| 10   | 3    | 49 | 24 | 0 | 42   |  | 10   | 9    | 20 | 28 | 1 | 41   |  |
| 20   | 4    | 58 | 34 | 0 | 44   |  | 20   | 9    | 29 | 41 | 1 | 43   |  |
| 30   | 4    | 7  | 45 | 0 | 45   |  | 30   | 9    | 38 | 55 | 1 | 44   |  |
| 40   | 4    | 16 | 56 | 0 | 47   |  | 40   | 9    | 48 | 8  | 1 | 46   |  |
| 50   | 4    | 26 | 7  | 0 | 49   |  | 50   | 9    | 57 | 21 | 1 | 47   |  |
| 5    | 4    | 35 | 18 | 0 | 50   |  | 11   | 10   | 6  | 35 | 1 | 49   |  |
| 10   | 4    | 44 | 29 | 0 | 52   |  | 10   | 10   | 15 | 48 | 2 | 50   |  |
| 20   | 4    | 53 | 40 | 0 | 54   |  | 20   | 10   | 25 | 2  | 1 | 52   |  |
| 30   | 5    | 2  | 51 | 0 | 55   |  | 30   | 10   | 34 | 16 | 1 | 53   |  |
| 40   | 5    | 12 | 2  | 0 | 57   |  | 40   | 10   | 43 | 30 | 1 | 55   |  |
| 50   | 5    | 21 | 13 | 0 | 59   |  | 50   | 10   | 52 | 44 | 1 | 56   |  |
| 6    | 5    | 30 | 25 | 1 | 0    |  | 12   | 11   | 1  | 58 | 1 | 58   |  |
| sub. |      |    |    |   |      |  | sub. |      |    |    |   |      |  |



# CANON ASCENSIONVM RECTARVM

| Gra.      | V    |      |    |    | Dra. |    | Gra.      | V    |      |    |    | Dra. |    |
|-----------|------|------|----|----|------|----|-----------|------|------|----|----|------|----|
|           | scr. | tem. | I  | II | I    | II |           | scr. | tem. | I  | II | I    | II |
| <b>12</b> | 11   | 1    | 58 | 1  | 58   |    | <b>18</b> | 16   | 35   | 47 | 2  | 52   |    |
| 10        | 11   | 11   | 12 | 1  | 59   |    | 10        | 16   | 45   | 6  | 2  | 54   |    |
| 20        | 11   | 20   | 26 | 2  | 1    |    | 20        | 16   | 54   | 25 | 2  | 55   |    |
| 30        | 11   | 29   | 41 | 2  | 3    |    | 30        | 17   | 3    | 44 | 2  | 56   |    |
| 40        | 11   | 38   | 56 | 2  | 5    |    | 40        | 17   | 13   | 3  | 2  | 58   |    |
| 50        | 11   | 48   | 11 | 2  | 6    |    | 50        | 17   | 22   | 23 | 2  | 59   |    |
| <b>13</b> | 11   | 57   | 26 | 2  | 8    |    | <b>19</b> | 17   | 31   | 43 | 3  | 1    |    |
| 10        | 12   | 6    | 41 | 2  | 9    |    | 10        | 17   | 41   | 3  | 3  | 2    |    |
| 20        | 12   | 15   | 56 | 2  | 11   |    | 20        | 17   | 50   | 23 | 3  | 4    |    |
| 30        | 12   | 25   | 11 | 2  | 12   |    | 30        | 17   | 59   | 43 | 3  | 5    |    |
| 40        | 12   | 34   | 26 | 2  | 14   |    | 40        | 18   | 9    | 3  | 3  | 6    |    |
| 50        | 12   | 43   | 41 | 2  | 15   |    | 50        | 18   | 18   | 24 | 3  | 8    |    |
| <b>14</b> | 12   | 52   | 57 | 2  | 17   |    | <b>20</b> | 18   | 27   | 45 | 3  | 9    |    |
| 10        | 13   | 2    | 12 | 2  | 18   |    | 10        | 18   | 37   | 6  | 2  | 11   |    |
| 20        | 13   | 11   | 28 | 2  | 20   |    | 20        | 18   | 46   | 27 | 3  | 12   |    |
| 30        | 13   | 20   | 44 | 2  | 21   |    | 30        | 18   | 55   | 48 | 3  | 13   |    |
| 40        | 13   | 30   | 0  | 2  | 23   |    | 40        | 19   | 5    | 9  | 3  | 15   |    |
| 50        | 13   | 39   | 16 | 2  | 24   |    | 50        | 19   | 14   | 31 | 3  | 16   |    |
| <b>15</b> | 13   | 48   | 32 | 2  | 26   |    | <b>21</b> | 19   | 23   | 53 | 3  | 17   |    |
| 10        | 13   | 57   | 48 | 2  | 27   |    | 10        | 19   | 33   | 15 | 3  | 19   |    |
| 20        | 14   | 7    | 4  | 2  | 29   |    | 20        | 19   | 42   | 37 | 3  | 20   |    |
| 30        | 14   | 16   | 21 | 2  | 30   |    | 30        | 19   | 51   | 59 | 3  | 21   |    |
| 40        | 14   | 25   | 38 | 2  | 32   |    | 40        | 20   | 1    | 21 | 3  | 23   |    |
| 50        | 14   | 34   | 55 | 2  | 33   |    | 50        | 20   | 10   | 44 | 3  | 24   |    |
| <b>16</b> | 14   | 44   | 12 | 2  | 35   |    | <b>22</b> | 20   | 20   | 7  | 3  | 25   |    |
| 10        | 14   | 53   | 29 | 2  | 36   |    | 10        | 20   | 29   | 30 | 3  | 27   |    |
| 20        | 15   | 2    | 46 | 2  | 38   |    | 20        | 20   | 38   | 53 | 3  | 28   |    |
| 30        | 15   | 12   | 3  | 2  | 39   |    | 30        | 20   | 48   | 16 | 3  | 29   |    |
| 40        | 15   | 21   | 21 | 2  | 41   |    | 40        | 20   | 57   | 39 | 3  | 31   |    |
| 50        | 15   | 30   | 39 | 2  | 42   |    | 50        | 21   | 7    | 3  | 3  | 32   |    |
| <b>17</b> | 15   | 39   | 57 | 2  | 44   |    | <b>23</b> | 21   | 16   | 27 | 3  | 33   |    |
| 10        | 15   | 49   | 15 | 2  | 45   |    | 10        | 21   | 25   | 51 | 3  | 35   |    |
| 20        | 15   | 58   | 33 | 2  | 47   |    | 20        | 21   | 35   | 15 | 3  | 36   |    |
| 30        | 16   | 7    | 51 | 2  | 48   |    | 30        | 21   | 44   | 40 | 3  | 37   |    |
| 40        | 16   | 17   | 9  | 2  | 50   |    | 40        | 21   | 54   | 5  | 3  | 39   |    |
| 50        | 16   | 26   | 28 | 2  | 51   |    | 50        | 22   | 3    | 30 | 3  | 40   |    |
| <b>18</b> | 16   | 35   | 47 | 2  | 52   |    | <b>24</b> | 22   | 15   | 55 | 3  | 41   |    |
|           |      |      |    |    | sub. |    |           |      |      |    |    | sub. |    |



| V    |    |    |    |   |    | Dra. |  | 8    |    |    |    |      |    | Dra. |  |
|------|----|----|----|---|----|------|--|------|----|----|----|------|----|------|--|
| tem. |    | /  | // | / | // |      |  | tem. |    | /  | // | /    | // |      |  |
| 24   | 22 | 12 | 55 | 3 | 41 | O    |  | 27   | 54 | 20 | 4  | 21   |    |      |  |
| 10   | 22 | 22 | 20 | 3 | 42 | 10   |  | 28   | 3  | 53 | 4  | 22   |    |      |  |
| 20   | 22 | 31 | 46 | 3 | 43 | 20   |  | 28   | 13 | 27 | 4  | 23   |    |      |  |
| 30   | 22 | 41 | 12 | 3 | 45 | 30   |  | 28   | 23 | 1  | 4  | 24   |    |      |  |
| 40   | 22 | 50 | 38 | 3 | 46 | 40   |  | 28   | 32 | 35 | 4  | 25   |    |      |  |
| 50   | 23 | 0  | 4  | 3 | 47 | 50   |  | 28   | 42 | 9  | 4  | 26   |    |      |  |
| 25   | 23 | 9  | 30 | 3 | 48 | I    |  | 28   | 51 | 43 | 4  | 27   |    |      |  |
| 10   | 23 | 18 | 57 | 3 | 49 | 10   |  | 29   | 1  | 18 | 4  | 28   |    |      |  |
| 20   | 23 | 28 | 24 | 3 | 51 | 20   |  | 29   | 10 | 53 | 4  | 29   |    |      |  |
| 30   | 23 | 37 | 51 | 3 | 52 | 30   |  | 29   | 20 | 28 | 4  | 30   |    |      |  |
| 40   | 23 | 47 | 18 | 3 | 53 | 40   |  | 29   | 30 | 3  | 4  | 30   |    |      |  |
| 50   | 23 | 56 | 45 | 3 | 54 | 50   |  | 29   | 39 | 39 | 4  | 31   |    |      |  |
| 26   | 24 | 6  | 12 | 3 | 55 | 2    |  | 29   | 49 | 15 | 4  | 32   |    |      |  |
| 10   | 24 | 15 | 40 | 3 | 56 | 10   |  | 29   | 58 | 51 | 5  | 33   |    |      |  |
| 20   | 24 | 25 | 8  | 3 | 57 | 20   |  | 30   | 8  | 28 | 4  | 34   |    |      |  |
| 30   | 24 | 34 | 36 | 3 | 59 | 30   |  | 30   | 18 | 5  | 4  | 34   |    |      |  |
| 40   | 24 | 44 | 4  | 4 | 0  | 40   |  | 30   | 27 | 42 | 4  | 35   |    |      |  |
| 50   | 24 | 53 | 33 | 4 | 1  | 50   |  | 30   | 37 | 19 | 4  | 36   |    |      |  |
| 27   | 25 | 3  | 2  | 4 | 2  | 3    |  | 30   | 46 | 56 | 4  | 37   |    |      |  |
| 10   | 25 | 12 | 31 | 4 | 3  | 10   |  | 30   | 56 | 34 | 4  | 38   |    |      |  |
| 20   | 25 | 22 | 0  | 4 | 4  | 20   |  | 31   | 6  | 12 | 4  | 38   |    |      |  |
| 30   | 25 | 31 | 30 | 4 | 5  | 30   |  | 31   | 15 | 50 | 4  | 39   |    |      |  |
| 40   | 25 | 41 | 0  | 4 | 6  | 40   |  | 31   | 25 | 28 | 4  | 40   |    |      |  |
| 50   | 25 | 50 | 30 | 4 | 7  | 50   |  | 31   | 35 | 7  | 4  | 41   |    |      |  |
| 28   | 26 | 0  | 0  | 4 | 8  | 4    |  | 31   | 44 | 46 | 4  | 42   |    |      |  |
| 10   | 26 | 9  | 30 | 4 | 9  | 10   |  | 31   | 54 | 25 | 4  | 43   |    |      |  |
| 20   | 26 | 19 | 1  | 4 | 10 | 20   |  | 32   | 4  | 4  | 4  | 44   |    |      |  |
| 30   | 26 | 28 | 32 | 4 | 12 | 30   |  | 32   | 13 | 43 | 4  | 45   |    |      |  |
| 40   | 26 | 38 | 3  | 4 | 13 | 40   |  | 32   | 23 | 23 | 4  | 45   |    |      |  |
| 50   | 26 | 47 | 34 | 4 | 14 | 50   |  | 32   | 33 | 4  | 4  | 46   |    |      |  |
| 29   | 27 | 57 | 6  | 4 | 15 | 5    |  | 32   | 42 | 45 | 4  | 47   |    |      |  |
| 10   | 27 | 6  | 38 | 4 | 16 | 10   |  | 32   | 52 | 26 | 4  | 47   |    |      |  |
| 20   | 27 | 16 | 10 | 4 | 17 | 20   |  | 33   | 2  | 7  | 4  | 48   |    |      |  |
| 30   | 27 | 25 | 42 | 4 | 18 | 30   |  | 33   | 11 | 48 | 4  | 49   |    |      |  |
| 40   | 27 | 35 | 14 | 4 | 19 | 40   |  | 33   | 21 | 30 | 4  | 50   |    |      |  |
| 50   | 27 | 44 | 47 | 4 | 20 | 50   |  | 33   | 31 | 12 | 4  | 50   |    |      |  |
| 30   | 27 | 54 | 20 | 4 | 21 | 6    |  | 33   | 40 | 54 | 4  | 51   |    |      |  |
| sub. |    |    |    |   |    | sub. |  |      |    |    |    | sub. |    |      |  |



# CANON ASCENSIONVM RECTARVM

| 8         |      |         |    |   |    | 8         |      |         |    |   |    |
|-----------|------|---------|----|---|----|-----------|------|---------|----|---|----|
|           |      | Differ. |    |   |    |           |      | Differ. |    |   |    |
|           | tem. | /       | // | / | // |           | tem. | /       | // | / | // |
| <b>6</b>  | 33   | 40      | 54 | 4 | 51 | <b>12</b> | 39   | 33      | 16 | 5 | 10 |
| 10        | 33   | 50      | 37 | 4 | 52 | 10        | 39   | 43      | 9  | 5 | 10 |
| 20        | 34   | 0       | 20 | 4 | 52 | 20        | 39   | 53      | 2  | 5 | 11 |
| 30        | 34   | 10      | 3  | 4 | 53 | 30        | 40   | 2       | 55 | 5 | 11 |
| 40        | 34   | 19      | 46 | 4 | 54 | 40        | 40   | 12      | 48 | 5 | 11 |
| 50        | 34   | 29      | 29 | 4 | 54 | 50        | 40   | 22      | 42 | 5 | 12 |
| <b>7</b>  | 34   | 39      | 13 | 4 | 55 | <b>13</b> | 40   | 32      | 36 | 5 | 12 |
| 10        | 34   | 48      | 57 | 4 | 56 | 10        | 40   | 42      | 30 | 5 | 12 |
| 20        | 34   | 58      | 41 | 4 | 56 | 20        | 40   | 52      | 25 | 5 | 12 |
| 30        | 35   | 8       | 25 | 4 | 57 | 30        | 41   | 2       | 20 | 5 | 13 |
| 40        | 35   | 18      | 10 | 4 | 58 | 40        | 41   | 12      | 15 | 5 | 13 |
| 50        | 35   | 27      | 55 | 4 | 58 | 50        | 41   | 22      | 10 | 5 | 13 |
| <b>8</b>  | 35   | 37      | 40 | 4 | 59 | <b>14</b> | 41   | 32      | 6  | 5 | 13 |
| 10        | 35   | 37      | 26 | 4 | 59 | 10        | 41   | 42      | 2  | 5 | 14 |
| 20        | 35   | 57      | 12 | 5 | 0  | 20        | 41   | 51      | 58 | 5 | 14 |
| 30        | 36   | 6       | 58 | 5 | 1  | 30        | 42   | 1       | 55 | 5 | 14 |
| 40        | 36   | 16      | 45 | 5 | 1  | 40        | 42   | 11      | 52 | 5 | 14 |
| 50        | 36   | 26      | 32 | 5 | 2  | 50        | 42   | 21      | 50 | 5 | 14 |
| <b>9</b>  | 36   | 36      | 19 | 5 | 2  | <b>15</b> | 42   | 31      | 48 | 5 | 15 |
| 10        | 36   | 46      | 6  | 5 | 3  | 10        | 42   | 41      | 46 | 5 | 15 |
| 20        | 36   | 55      | 54 | 5 | 3  | 20        | 42   | 51      | 44 | 5 | 15 |
| 30        | 37   | 5       | 42 | 5 | 4  | 30        | 43   | 1       | 43 | 5 | 15 |
| 40        | 37   | 15      | 30 | 5 | 4  | 40        | 43   | 11      | 42 | 5 | 15 |
| 50        | 37   | 25      | 18 | 5 | 5  | 50        | 43   | 21      | 41 | 5 | 15 |
| <b>10</b> | 37   | 35      | 7  | 5 | 5  | <b>16</b> | 43   | 31      | 40 | 5 | 15 |
| 10        | 37   | 44      | 56 | 5 | 6  | 10        | 43   | 41      | 40 | 5 | 15 |
| 20        | 37   | 54      | 46 | 5 | 6  | 20        | 43   | 51      | 40 | 5 | 15 |
| 30        | 38   | 4       | 36 | 5 | 7  | 30        | 44   | 1       | 40 | 5 | 16 |
| 40        | 38   | 14      | 26 | 5 | 7  | 40        | 44   | 11      | 41 | 5 | 16 |
| 50        | 38   | 24      | 16 | 5 | 8  | 50        | 44   | 21      | 42 | 5 | 16 |
| <b>11</b> | 38   | 34      | 7  | 5 | 8  | <b>17</b> | 44   | 31      | 43 | 5 | 16 |
| 10        | 38   | 43      | 58 | 5 | 8  | 10        | 44   | 41      | 44 | 5 | 16 |
| 20        | 38   | 53      | 49 | 5 | 9  | 20        | 44   | 51      | 46 | 5 | 16 |
| 30        | 39   | 3       | 40 | 5 | 9  | 30        | 45   | 1       | 48 | 5 | 16 |
| 40        | 39   | 13      | 32 | 5 | 9  | 40        | 45   | 11      | 50 | 5 | 15 |
| 50        | 39   | 23      | 24 | 5 | 10 | 50        | 45   | 21      | 53 | 5 | 15 |
| <b>12</b> | 39   | 33      | 16 | 5 | 10 | <b>18</b> | 45   | 31      | 56 | 5 | 15 |
| sub.      |      |         |    |   |    | sub.      |      |         |    |   |    |



| Gra. |      | 8  |    | Dra. |    | Gra. |      | 8  |    | Dra. |    |
|------|------|----|----|------|----|------|------|----|----|------|----|
| scr. | tem. | /  | // | /    | // | scr. | tem. | /  | // | /    | // |
| 18   | 45   | 31 | 56 | 5    | 15 | 24   | 51   | 37 | 8  | 5    | 7  |
| 10   | 45   | 41 | 59 | 5    | 15 | 10   | 51   | 47 | 22 | 5    | 7  |
| 20   | 45   | 52 | 3  | 5    | 15 | 20   | 51   | 57 | 37 | 5    | 6  |
| 30   | 46   | 2  | 7  | 5    | 15 | 30   | 52   | 7  | 52 | 5    | 6  |
| 40   | 46   | 12 | 11 | 5    | 15 | 40   | 52   | 18 | 7  | 5    | 5  |
| 50   | 46   | 22 | 16 | 5    | 15 | 50   | 52   | 28 | 22 | 5    | 5  |
| 19   | 46   | 32 | 21 | 5    | 15 | 25   | 52   | 38 | 38 | 5    | 4  |
| 10   | 46   | 42 | 26 | 5    | 15 | 10   | 52   | 48 | 54 | 5    | 4  |
| 20   | 46   | 52 | 32 | 5    | 15 | 20   | 52   | 59 | 10 | 5    | 3  |
| 30   | 47   | 2  | 38 | 5    | 14 | 30   | 53   | 9  | 27 | 5    | 3  |
| 40   | 47   | 12 | 44 | 5    | 14 | 40   | 53   | 19 | 44 | 5    | 2  |
| 50   | 47   | 22 | 50 | 5    | 14 | 50   | 53   | 30 | 1  | 5    | 2  |
| 20   | 47   | 32 | 57 | 5    | 14 | 26   | 53   | 40 | 19 | 5    | 1  |
| 10   | 47   | 43 | 4  | 5    | 14 | 10   | 53   | 50 | 37 | 5    | 1  |
| 20   | 47   | 53 | 11 | 5    | 14 | 20   | 54   | 0  | 55 | 5    | 0  |
| 30   | 48   | 3  | 19 | 5    | 13 | 30   | 54   | 11 | 14 | 5    | 0  |
| 40   | 48   | 13 | 27 | 5    | 13 | 40   | 54   | 21 | 33 | 4    | 59 |
| 50   | 48   | 23 | 35 | 5    | 13 | 50   | 54   | 31 | 52 | 4    | 59 |
| 21   | 48   | 33 | 43 | 5    | 13 | 27   | 54   | 42 | 11 | 4    | 58 |
| 10   | 48   | 43 | 51 | 5    | 13 | 10   | 54   | 52 | 31 | 4    | 58 |
| 20   | 48   | 54 | 0  | 5    | 12 | 20   | 55   | 2  | 51 | 4    | 57 |
| 30   | 49   | 4  | 9  | 5    | 12 | 30   | 55   | 13 | 11 | 4    | 56 |
| 40   | 49   | 14 | 19 | 5    | 12 | 40   | 55   | 23 | 31 | 4    | 56 |
| 50   | 49   | 24 | 29 | 5    | 12 | 50   | 55   | 33 | 52 | 4    | 55 |
| 22   | 49   | 34 | 40 | 5    | 11 | 28   | 55   | 44 | 13 | 4    | 54 |
| 10   | 49   | 44 | 51 | 5    | 11 | 10   | 55   | 54 | 34 | 4    | 53 |
| 20   | 49   | 55 | 2  | 5    | 11 | 20   | 56   | 4  | 56 | 4    | 53 |
| 30   | 50   | 5  | 13 | 5    | 11 | 30   | 56   | 15 | 18 | 4    | 52 |
| 40   | 50   | 15 | 25 | 5    | 10 | 40   | 56   | 25 | 40 | 4    | 51 |
| 50   | 50   | 25 | 37 | 5    | 10 | 50   | 56   | 36 | 2  | 4    | 50 |
| 23   | 50   | 35 | 49 | 5    | 10 | 29   | 56   | 46 | 25 | 4    | 50 |
| 10   | 50   | 46 | 1  | 5    | 9  | 10   | 56   | 56 | 48 | 4    | 49 |
| 20   | 50   | 56 | 14 | 5    | 9  | 20   | 57   | 7  | 11 | 4    | 48 |
| 30   | 51   | 6  | 27 | 5    | 9  | 30   | 57   | 17 | 35 | 4    | 47 |
| 40   | 51   | 16 | 40 | 5    | 8  | 40   | 57   | 27 | 59 | 4    | 46 |
| 10   | 51   | 26 | 54 | 5    | 8  | 50   | 57   | 38 | 23 | 4    | 46 |
| 24   | 51   | 37 | 8  | 5    | 7  | 30   | 57   | 48 | 48 | 4    | 45 |
| sub. |      |    |    |      |    | sub. |      |    |    |      |    |



# CANON ASCENSIONVM RECTARVM

| II   |    |    |         |   |    | II   |    |    |         |   |    |
|------|----|----|---------|---|----|------|----|----|---------|---|----|
| tem. |    |    | Differ. |   |    | tem. |    |    | Differ. |   |    |
|      |    |    |         |   |    |      |    |    |         |   |    |
| O    |    |    | 48      |   |    | 6    |    |    | 34      |   |    |
| 10   | 57 | 59 | 48      | 4 | 45 | 10   | 64 | 17 | 9       | 4 | 8  |
| 20   | 57 | 59 | 13      | 4 | 44 | 20   | 64 | 27 | 44      | 4 | 6  |
| 30   | 58 | 20 | 3       | 4 | 43 | 30   | 64 | 38 | 19      | 4 | 4  |
| 40   | 58 | 30 | 29      | 4 | 42 | 40   | 64 | 48 | 54      | 4 | 3  |
| 50   | 58 | 40 | 55      | 4 | 41 | 50   | 64 | 59 | 29      | 4 | 2  |
| I    |    |    | 21      |   |    | 7    |    |    | 4       |   |    |
| 10   | 58 | 51 | 47      | 4 | 40 | 10   | 65 | 10 | 4       | 4 | 1  |
| 20   | 59 | 1  | 14      | 4 | 39 | 20   | 65 | 21 | 40      | 3 | 59 |
| 30   | 59 | 12 | 41      | 4 | 38 | 30   | 65 | 31 | 16      | 3 | 58 |
| 40   | 59 | 22 | 8       | 4 | 37 | 40   | 65 | 41 | 52      | 3 | 57 |
| 50   | 59 | 33 | 36      | 4 | 36 | 50   | 65 | 52 | 29      | 3 | 56 |
| 2    |    |    | 4       |   |    | 8    |    |    | 3       |   |    |
| 10   | 59 | 43 | 32      | 4 | 35 | 10   | 66 | 3  | 6       | 3 | 54 |
| 20   | 60 | 4  | 0       | 4 | 34 | 20   | 66 | 13 | 43      | 3 | 53 |
| 30   | 60 | 15 | 29      | 4 | 33 | 30   | 66 | 24 | 20      | 3 | 51 |
| 40   | 60 | 25 | 58      | 4 | 32 | 40   | 66 | 34 | 58      | 3 | 50 |
| 50   | 60 | 35 | 27      | 4 | 31 | 50   | 66 | 45 | 36      | 3 | 49 |
| 3    |    |    | 28      |   |    | 9    |    |    | 14      |   |    |
| 10   | 60 | 46 | 27      | 4 | 29 | 10   | 67 | 56 | 6       | 3 | 48 |
| 20   | 60 | 56 | 27      | 4 | 28 | 20   | 67 | 6  | 52      | 3 | 46 |
| 30   | 61 | 7  | 27      | 4 | 27 | 30   | 67 | 17 | 31      | 3 | 45 |
| 40   | 61 | 17 | 27      | 4 | 26 | 40   | 67 | 28 | 10      | 3 | 44 |
| 50   | 61 | 28 | 27      | 4 | 25 | 50   | 67 | 38 | 49      | 3 | 42 |
| 4    |    |    | 24      |   |    | 10   |    |    | 7       |   |    |
| 10   | 61 | 38 | 29      | 4 | 24 | 10   | 68 | 49 | 28      | 3 | 41 |
| 20   | 61 | 49 | 29      | 4 | 23 | 20   | 68 | 0  | 7       | 3 | 40 |
| 30   | 61 | 58 | 29      | 4 | 22 | 30   | 68 | 10 | 47      | 3 | 38 |
| 40   | 62 | 0  | 0       | 4 | 21 | 40   | 68 | 21 | 27      | 3 | 37 |
| 50   | 62 | 10 | 31      | 4 | 20 | 50   | 68 | 32 | 7       | 3 | 35 |
| 5    |    |    | 12      |   |    | 11   |    |    | 31      |   |    |
| 10   | 62 | 21 | 3       | 4 | 19 | 10   | 68 | 42 | 47      | 3 | 34 |
| 20   | 62 | 31 | 35      | 4 | 17 | 20   | 68 | 53 | 28      | 3 | 32 |
| 30   | 62 | 42 | 7       | 4 | 16 | 30   | 69 | 4  | 9       | 3 | 31 |
| 40   | 62 | 52 | 39      | 4 | 15 | 40   | 69 | 14 | 50      | 3 | 29 |
| 50   | 63 | 3  | 12      | 4 | 14 | 50   | 69 | 25 | 31      | 3 | 28 |
| 6    |    |    | 34      |   |    | 12   |    |    | 12      |   |    |
| 10   | 63 | 13 | 45      | 4 | 13 | 10   | 69 | 36 | 12      | 3 | 26 |
| 20   | 63 | 24 | 18      | 4 | 12 | 20   | 69 | 46 | 54      | 3 | 25 |
| 30   | 63 | 34 | 52      | 4 | 10 | 30   | 69 | 57 | 36      | 3 | 23 |
| 40   | 63 | 45 | 26      | 4 | 9  | 40   | 70 | 8  | 18      | 3 | 22 |
| 50   | 63 | 56 | 0       | 4 | 8  | 50   | 70 | 19 | 0       | 3 | 20 |
| sub. |    |    | sub.    |   |    | sub. |    |    | sub.    |   |    |



| II        |    |    |      |    |    | II        |    |    |      |    |    |
|-----------|----|----|------|----|----|-----------|----|----|------|----|----|
| tem.      |    |    | Dra. |    |    | tem.      |    |    | Dra. |    |    |
| /         | // |    | /    | // |    | /         | // |    | /    | // |    |
| <b>12</b> | 70 | 29 | 42   | 3  | 19 | <b>18</b> | 76 | 57 | 18   | 2  | 19 |
| 10        | 70 | 40 | 25   | 3  | 17 | 10        | 77 | 8  | 2    | 2  | 17 |
| 20        | 70 | 51 | 8    | 3  | 16 | 20        | 77 | 18 | 51   | 2  | 15 |
| 30        | 71 | 1  | 51   | 3  | 14 | 30        | 77 | 29 | 40   | 2  | 14 |
| 40        | 71 | 12 | 34   | 3  | 13 | 40        | 77 | 40 | 29   | 2  | 12 |
| 50        | 71 | 23 | 17   | 3  | 11 | 50        | 77 | 51 | 18   | 2  | 10 |
| <b>13</b> | 71 | 34 | 1    | 3  | 10 | <b>19</b> | 78 | 2  | 8    | 2  | 8  |
| 10        | 71 | 44 | 45   | 3  | 8  | 10        | 78 | 12 | 58   | 2  | 6  |
| 20        | 71 | 55 | 29   | 3  | 7  | 20        | 78 | 23 | 48   | 2  | 4  |
| 30        | 72 | 6  | 13   | 3  | 5  | 30        | 78 | 34 | 38   | 2  | 3  |
| 40        | 72 | 16 | 57   | 3  | 3  | 40        | 78 | 45 | 48   | 2  | 1  |
| 50        | 72 | 27 | 42   | 3  | 2  | 50        | 78 | 56 | 18   | 1  | 59 |
| <b>14</b> | 72 | 38 | 27   | 3  | 0  | <b>20</b> | 79 | 7  | 8    | 1  | 57 |
| 10        | 72 | 49 | 12   | 2  | 58 | 10        | 79 | 17 | 58   | 1  | 55 |
| 20        | 72 | 59 | 57   | 2  | 57 | 20        | 79 | 28 | 49   | 1  | 53 |
| 30        | 73 | 10 | 42   | 2  | 55 | 30        | 79 | 39 | 40   | 1  | 52 |
| 40        | 73 | 21 | 27   | 2  | 53 | 40        | 79 | 50 | 31   | 1  | 50 |
| 50        | 73 | 32 | 13   | 2  | 52 | 50        | 80 | 1  | 22   | 1  | 48 |
| <b>15</b> | 73 | 42 | 59   | 2  | 50 | <b>21</b> | 80 | 12 | 13   | 1  | 46 |
| 10        | 73 | 53 | 45   | 2  | 48 | 10        | 80 | 23 | 4    | 1  | 44 |
| 20        | 74 | 4  | 31   | 2  | 46 | 20        | 80 | 33 | 55   | 1  | 42 |
| 30        | 74 | 15 | 17   | 2  | 45 | 30        | 80 | 44 | 46   | 1  | 41 |
| 40        | 74 | 26 | 4    | 2  | 43 | 40        | 80 | 55 | 37   | 1  | 39 |
| 50        | 74 | 36 | 51   | 2  | 41 | 50        | 81 | 6  | 29   | 1  | 37 |
| <b>16</b> | 74 | 47 | 38   | 2  | 40 | <b>22</b> | 81 | 17 | 21   | 1  | 35 |
| 10        | 74 | 58 | 25   | 2  | 38 | 10        | 81 | 28 | 13   | 1  | 33 |
| 20        | 75 | 9  | 12   | 2  | 36 | 20        | 81 | 39 | 5    | 1  | 31 |
| 30        | 75 | 19 | 59   | 2  | 35 | 30        | 81 | 49 | 57   | 1  | 29 |
| 40        | 75 | 30 | 47   | 2  | 33 | 40        | 82 | 0  | 49   | 1  | 27 |
| 50        | 75 | 41 | 35   | 2  | 31 | 50        | 82 | 11 | 41   | 1  | 25 |
| <b>17</b> | 75 | 52 | 23   | 2  | 30 | <b>23</b> | 82 | 22 | 33   | 1  | 23 |
| 10        | 76 | 3  | 11   | 2  | 28 | 10        | 82 | 33 | 25   | 1  | 21 |
| 20        | 76 | 13 | 59   | 2  | 26 | 20        | 82 | 44 | 17   | 1  | 19 |
| 30        | 76 | 24 | 47   | 2  | 25 | 30        | 82 | 55 | 10   | 1  | 17 |
| 40        | 76 | 35 | 35   | 2  | 23 | 40        | 83 | 6  | 3    | 1  | 15 |
| 50        | 76 | 46 | 24   | 2  | 21 | 50        | 83 | 16 | 56   | 1  | 13 |
| <b>18</b> | 76 | 57 | 13   | 2  | 19 | <b>24</b> | 83 | 27 | 49   | 1  | 11 |
| sub.      |    |    |      |    |    | sub.      |    |    |      |    |    |



# CANON ASCENSIONVM RECTARVM

| II |      |    |    |   | Differ. |    | 96 |      |    |    |   | Differ. |    |  |  |
|----|------|----|----|---|---------|----|----|------|----|----|---|---------|----|--|--|
|    | tem. | /  | // |   | /       | // |    | tem. | /  | // |   | /       | // |  |  |
| 24 | 83   | 27 | 49 | 1 | 11      | 0  | 90 | 0    | 0  | 0  | 0 | 0       | 0  |  |  |
| 10 | 83   | 38 | 41 | 1 | 10      | 10 | 90 | 10   | 54 | 0  | 0 | 2       | 2  |  |  |
| 20 | 83   | 49 | 34 | 1 | 8       | 20 | 90 | 21   | 48 | 0  | 0 | 4       | 4  |  |  |
| 30 | 84   | 0  | 7  | 1 | 6       | 30 | 90 | 32   | 42 | 0  | 0 | 6       | 6  |  |  |
| 40 | 84   | 11 | 20 | 1 | 4       | 40 | 90 | 43   | 37 | 0  | 0 | 8       | 8  |  |  |
| 50 | 84   | 22 | 13 | 1 | 2       | 50 | 90 | 54   | 31 | 0  | 0 | 10      | 10 |  |  |
| 25 | 84   | 33 | 6  | 1 | 0       | 1  | 91 | 5    | 25 | 0  | 0 | 12      | 12 |  |  |
| 10 | 84   | 43 | 59 | 0 | 58      | 10 | 91 | 16   | 19 | 0  | 0 | 14      | 14 |  |  |
| 20 | 84   | 54 | 52 | 0 | 56      | 20 | 91 | 27   | 13 | 0  | 0 | 16      | 16 |  |  |
| 30 | 85   | 5  | 45 | 0 | 54      | 30 | 91 | 38   | 7  | 0  | 0 | 18      | 18 |  |  |
| 40 | 85   | 16 | 38 | 0 | 52      | 40 | 91 | 49   | 1  | 0  | 0 | 20      | 20 |  |  |
| 50 | 85   | 27 | 32 | 0 | 50      | 50 | 91 | 59   | 55 | 0  | 0 | 22      | 22 |  |  |
| 26 | 85   | 38 | 26 | 0 | 48      | 2  | 92 | 10   | 49 | 0  | 0 | 24      | 24 |  |  |
| 10 | 85   | 49 | 19 | 0 | 46      | 10 | 92 | 21   | 43 | 0  | 0 | 26      | 26 |  |  |
| 20 | 86   | 0  | 13 | 0 | 44      | 20 | 92 | 32   | 37 | 0  | 0 | 28      | 28 |  |  |
| 30 | 86   | 11 | 6  | 0 | 42      | 30 | 92 | 43   | 31 | 0  | 0 | 30      | 30 |  |  |
| 40 | 86   | 22 | 0  | 0 | 40      | 40 | 92 | 54   | 25 | 0  | 0 | 32      | 32 |  |  |
| 50 | 86   | 32 | 54 | 0 | 38      | 50 | 93 | 5    | 19 | 0  | 0 | 34      | 34 |  |  |
| 27 | 86   | 43 | 48 | 0 | 36      | 3  | 93 | 16   | 12 | 0  | 0 | 36      | 36 |  |  |
| 10 | 86   | 54 | 41 | 0 | 34      | 10 | 93 | 27   | 6  | 0  | 0 | 38      | 38 |  |  |
| 20 | 87   | 5  | 35 | 0 | 32      | 20 | 93 | 38   | 0  | 0  | 0 | 40      | 40 |  |  |
| 30 | 87   | 16 | 29 | 0 | 30      | 30 | 93 | 48   | 54 | 0  | 0 | 42      | 42 |  |  |
| 40 | 87   | 27 | 23 | 0 | 28      | 40 | 93 | 59   | 47 | 0  | 0 | 44      | 44 |  |  |
| 50 | 87   | 38 | 17 | 0 | 26      | 50 | 94 | 10   | 41 | 0  | 0 | 46      | 46 |  |  |
| 28 | 87   | 49 | 11 | 0 | 24      | 4  | 94 | 21   | 34 | 0  | 0 | 48      | 48 |  |  |
| 10 | 88   | 0  | 5  | 0 | 22      | 10 | 94 | 32   | 28 | 0  | 0 | 50      | 50 |  |  |
| 20 | 88   | 10 | 59 | 0 | 20      | 20 | 94 | 43   | 22 | 0  | 0 | 52      | 52 |  |  |
| 30 | 88   | 21 | 53 | 0 | 18      | 30 | 94 | 54   | 15 | 0  | 0 | 54      | 54 |  |  |
| 40 | 88   | 32 | 47 | 0 | 16      | 40 | 95 | 5    | 8  | 0  | 0 | 56      | 56 |  |  |
| 50 | 88   | 43 | 41 | 0 | 14      | 50 | 95 | 16   | 1  | 0  | 0 | 58      | 58 |  |  |
| 29 | 88   | 54 | 35 | 0 | 12      | 5  | 95 | 26   | 54 | 1  | 0 | 0       | 0  |  |  |
| 10 | 89   | 5  | 29 | 0 | 10      | 10 | 95 | 37   | 47 | 1  | 1 | 2       | 2  |  |  |
| 20 | 89   | 16 | 23 | 0 | 8       | 20 | 95 | 48   | 40 | 1  | 1 | 4       | 4  |  |  |
| 30 | 89   | 27 | 18 | 0 | 6       | 30 | 95 | 59   | 33 | 1  | 1 | 6       | 6  |  |  |
| 40 | 89   | 38 | 12 | 0 | 4       | 40 | 96 | 10   | 26 | 1  | 1 | 8       | 8  |  |  |
| 50 | 89   | 49 | 6  | 0 | 2       | 50 | 96 | 21   | 19 | 1  | 1 | 10      | 10 |  |  |
| 30 | 90   | 0  | 0  | 0 | 0       | 6  | 96 | 32   | 11 | 1  | 1 | 11      | 11 |  |  |
|    |      |    |    |   | Sub     |    |    |      |    |    |   | Adde    |    |  |  |



| Gra.    ☿    Dña. |     |      |    |    |    | Gra.    ☿    Dña. |     |      |    |    |    |
|-------------------|-----|------|----|----|----|-------------------|-----|------|----|----|----|
| scr.              |     | tem. |    | /  |    | scr.              |     | tem. |    | /  |    |
| <b>6</b>          |     | 96   | 32 | 11 | 1  | <b>12</b>         |     | 103  | 2  | 47 | 2  |
| 10                | 96  | 43   | 4  | 1  | 13 | 10                | 103 | 13   | 36 | 2  | 19 |
| 20                | 96  | 53   | 57 | 1  | 15 | 20                | 103 | 24   | 25 | 2  | 23 |
| 30                | 97  | 4    | 50 | 1  | 17 | 30                | 103 | 35   | 13 | 2  | 25 |
| 40                | 97  | 15   | 43 | 1  | 19 | 40                | 103 | 46   | 1  | 2  | 26 |
| 50                | 97  | 26   | 35 | 1  | 21 | 50                | 103 | 56   | 49 | 2  | 28 |
| <b>7</b>          |     | 97   | 37 | 27 | 1  | <b>13</b>         |     | 104  | 7  | 37 | 2  |
| 10                | 97  | 48   | 19 | 1  | 23 | 10                | 104 | 18   | 25 | 2  | 30 |
| 20                | 97  | 59   | 11 | 1  | 27 | 20                | 104 | 29   | 13 | 2  | 31 |
| 30                | 98  | 10   | 3  | 1  | 29 | 30                | 104 | 40   | 1  | 2  | 33 |
| 40                | 98  | 20   | 55 | 1  | 31 | 40                | 104 | 50   | 48 | 2  | 35 |
| 50                | 98  | 31   | 47 | 1  | 33 | 50                | 105 | 1    | 35 | 2  | 36 |
| <b>8</b>          |     | 98   | 42 | 39 | 1  | <b>14</b>         |     | 105  | 12 | 22 | 2  |
| 10                | 98  | 53   | 31 | 1  | 35 | 10                | 105 | 23   | 9  | 2  | 40 |
| 20                | 99  | 4    | 23 | 1  | 37 | 20                | 105 | 33   | 56 | 2  | 41 |
| 30                | 99  | 15   | 14 | 1  | 39 | 30                | 105 | 44   | 43 | 2  | 43 |
| 40                | 99  | 26   | 5  | 1  | 41 | 40                | 105 | 55   | 29 | 2  | 45 |
| 50                | 99  | 36   | 56 | 1  | 42 | 50                | 106 | 6    | 15 | 2  | 46 |
| <b>9</b>          |     | 99   | 47 | 47 | 1  | <b>15</b>         |     | 106  | 17 | 1  | 2  |
| 10                | 99  | 58   | 38 | 1  | 46 | 10                | 106 | 27   | 47 | 2  | 50 |
| 20                | 100 | 9    | 29 | 1  | 48 | 20                | 106 | 38   | 33 | 2  | 52 |
| 30                | 100 | 20   | 20 | 1  | 50 | 30                | 106 | 49   | 18 | 2  | 53 |
| 40                | 100 | 31   | 11 | 1  | 52 | 40                | 107 | 0    | 3  | 2  | 55 |
| 50                | 100 | 42   | 2  | 1  | 53 | 50                | 107 | 10   | 48 | 2  | 57 |
| <b>10</b>         |     | 100  | 52 | 52 | 1  | <b>16</b>         |     | 107  | 21 | 33 | 3  |
| 10                | 101 | 3    | 42 | 1  | 55 | 10                | 107 | 32   | 18 | 3  | 58 |
| 20                | 101 | 14   | 32 | 2  | 57 | 20                | 107 | 43   | 3  | 3  | 0  |
| 30                | 101 | 25   | 22 | 2  | 59 | 30                | 107 | 53   | 47 | 3  | 2  |
| 40                | 101 | 36   | 12 | 2  | 1  | 40                | 108 | 4    | 31 | 3  | 3  |
| 50                | 101 | 47   | 2  | 2  | 3  | 50                | 108 | 15   | 15 | 3  | 7  |
| <b>11</b>         |     | 101  | 57 | 52 | 2  | <b>17</b>         |     | 108  | 25 | 59 | 3  |
| 10                | 102 | 8    | 42 | 2  | 8  | 10                | 108 | 36   | 43 | 3  | 10 |
| 20                | 102 | 19   | 31 | 2  | 10 | 20                | 108 | 47   | 26 | 3  | 11 |
| 30                | 102 | 30   | 20 | 2  | 12 | 30                | 109 | 58   | 9  | 3  | 13 |
| 40                | 102 | 41   | 9  | 2  | 14 | 40                | 109 | 8    | 52 | 3  | 14 |
| 50                | 102 | 51   | 58 | 2  | 15 | 50                | 109 | 19   | 35 | 3  | 16 |
| <b>12</b>         |     | 103  | 2  | 47 | 2  | <b>18</b>         |     | 109  | 30 | 18 | 3  |
|                   |     |      |    |    | 19 |                   |     |      |    |    | 19 |
| Adde              |     |      |    |    |    | Adde              |     |      |    |    |    |



# CANON ASCENSIONVM RECTARVM

| Differ. |     |    |    |    |    | Differ. |     |    |    |    |    |
|---------|-----|----|----|----|----|---------|-----|----|----|----|----|
| tem.    |     | /  |    | // |    | tem.    |     | /  |    | // |    |
| 18      | 109 | 30 | 18 | 3  | 19 | 24      | 115 | 53 | 26 | 4  | 8  |
| 10      | 109 | 41 | 0  | 3  | 20 | 10      | 116 | 4  | 0  | 4  | 9  |
| 20      | 109 | 51 | 42 | 3  | 22 | 20      | 116 | 14 | 34 | 4  | 10 |
| 30      | 110 | 2  | 24 | 3  | 23 | 30      | 116 | 25 | 8  | 4  | 12 |
| 40      | 110 | 13 | 6  | 3  | 25 | 40      | 116 | 35 | 42 | 4  | 13 |
| 50      | 110 | 23 | 48 | 3  | 26 | 50      | 116 | 46 | 15 | 4  | 14 |
| 19      | 110 | 34 | 29 | 3  | 28 | 25      | 116 | 56 | 48 | 4  | 15 |
| 10      | 110 | 45 | 10 | 3  | 29 | 10      | 117 | 7  | 21 | 4  | 16 |
| 20      | 110 | 55 | 51 | 3  | 31 | 20      | 117 | 17 | 53 | 4  | 17 |
| 30      | 111 | 6  | 32 | 3  | 32 | 30      | 117 | 28 | 25 | 4  | 19 |
| 40      | 111 | 17 | 13 | 3  | 34 | 40      | 117 | 38 | 57 | 4  | 20 |
| 50      | 111 | 27 | 53 | 3  | 35 | 50      | 117 | 49 | 29 | 4  | 21 |
| 20      | 111 | 38 | 33 | 3  | 37 | 26      | 118 | 0  | 0  | 4  | 22 |
| 10      | 111 | 49 | 13 | 3  | 38 | 10      | 118 | 10 | 31 | 4  | 23 |
| 20      | 111 | 59 | 53 | 3  | 40 | 20      | 118 | 21 | 2  | 4  | 24 |
| 30      | 112 | 10 | 32 | 3  | 41 | 30      | 118 | 31 | 33 | 4  | 25 |
| 40      | 112 | 21 | 11 | 3  | 42 | 40      | 118 | 42 | 3  | 4  | 26 |
| 50      | 112 | 31 | 50 | 3  | 44 | 50      | 118 | 52 | 33 | 4  | 27 |
| 21      | 112 | 42 | 29 | 3  | 45 | 27      | 119 | 3  | 3  | 4  | 28 |
| 10      | 112 | 53 | 8  | 3  | 46 | 10      | 119 | 13 | 33 | 4  | 29 |
| 20      | 113 | 3  | 46 | 3  | 48 | 20      | 119 | 24 | 2  | 4  | 30 |
| 30      | 113 | 14 | 24 | 3  | 49 | 30      | 119 | 34 | 31 | 4  | 31 |
| 40      | 113 | 25 | 2  | 3  | 50 | 40      | 119 | 45 | 0  | 4  | 32 |
| 50      | 113 | 35 | 40 | 3  | 51 | 50      | 119 | 55 | 28 | 4  | 33 |
| 22      | 113 | 46 | 17 | 3  | 53 | 28      | 120 | 5  | 56 | 4  | 34 |
| 10      | 113 | 56 | 54 | 3  | 54 | 10      | 120 | 16 | 24 | 4  | 35 |
| 20      | 114 | 7  | 31 | 3  | 56 | 20      | 120 | 26 | 52 | 4  | 36 |
| 30      | 114 | 18 | 8  | 3  | 57 | 30      | 120 | 37 | 19 | 4  | 37 |
| 40      | 114 | 28 | 44 | 3  | 58 | 40      | 120 | 47 | 46 | 4  | 38 |
| 50      | 114 | 39 | 20 | 3  | 59 | 50      | 120 | 58 | 13 | 4  | 39 |
| 23      | 114 | 49 | 56 | 4  | 1  | 29      | 121 | 8  | 39 | 4  | 40 |
| 10      | 115 | 0  | 31 | 4  | 2  | 10      | 121 | 19 | 5  | 4  | 41 |
| 20      | 115 | 11 | 6  | 4  | 3  | 20      | 121 | 29 | 31 | 4  | 42 |
| 30      | 115 | 21 | 41 | 4  | 4  | 30      | 121 | 29 | 57 | 4  | 42 |
| 40      | 115 | 32 | 16 | 4  | 6  | 40      | 121 | 50 | 22 | 4  | 43 |
| 50      | 115 | 42 | 51 | 4  | 7  | 50      | 122 | 0  | 47 | 4  | 44 |
| 24      | 115 | 53 | 26 | 4  | 8  | 30      | 122 | 11 | 12 | 4  | 45 |
| Adde    |     |    |    |    |    | Adde    |     |    |    |    |    |



| Gra. Ω Dña. |      |    |    |   |    | Gra. Ω Dña. |      |    |    |   |    |
|-------------|------|----|----|---|----|-------------|------|----|----|---|----|
| scr.        | tem. | /  | // | / | // | scr.        | tem. | /  | // | / | // |
| 0           | 122  | 11 | 12 | 4 | 45 | 6           | 128  | 22 | 52 | 5 | 7  |
| 10          | 122  | 21 | 37 | 4 | 46 | 10          | 128  | 33 | 6  | 5 | 8  |
| 20          | 122  | 32 | 1  | 4 | 46 | 20          | 128  | 43 | 20 | 5 | 8  |
| 30          | 122  | 42 | 25 | 4 | 47 | 30          | 128  | 53 | 33 | 5 | 9  |
| 40          | 122  | 52 | 49 | 4 | 48 | 40          | 129  | 3  | 46 | 5 | 9  |
| 50          | 123  | 3  | 12 | 4 | 49 | 50          | 129  | 13 | 59 | 5 | 9  |
| 1           | 123  | 13 | 35 | 4 | 50 | 7           | 129  | 24 | 11 | 5 | 10 |
| 10          | 123  | 23 | 58 | 4 | 51 | 10          | 129  | 34 | 23 | 5 | 10 |
| 20          | 123  | 34 | 20 | 4 | 51 | 20          | 129  | 44 | 35 | 5 | 10 |
| 30          | 123  | 44 | 42 | 4 | 52 | 30          | 129  | 54 | 47 | 5 | 11 |
| 40          | 123  | 55 | 4  | 4 | 53 | 40          | 130  | 4  | 58 | 5 | 11 |
| 50          | 124  | 5  | 26 | 4 | 53 | 50          | 130  | 15 | 9  | 5 | 11 |
| 2           | 124  | 15 | 47 | 4 | 54 | 8           | 130  | 25 | 20 | 5 | 11 |
| 10          | 124  | 26 | 8  | 4 | 55 | 10          | 130  | 35 | 31 | 5 | 12 |
| 20          | 124  | 36 | 29 | 4 | 56 | 20          | 130  | 45 | 41 | 5 | 12 |
| 30          | 124  | 46 | 49 | 4 | 57 | 30          | 130  | 55 | 51 | 5 | 12 |
| 40          | 124  | 57 | 9  | 4 | 57 | 40          | 131  | 6  | 0  | 5 | 12 |
| 50          | 125  | 7  | 29 | 4 | 58 | 50          | 131  | 16 | 9  | 5 | 12 |
| 3           | 125  | 17 | 49 | 4 | 58 | 9           | 131  | 26 | 17 | 5 | 13 |
| 10          | 125  | 28 | 8  | 4 | 59 | 10          | 131  | 36 | 25 | 5 | 13 |
| 20          | 125  | 38 | 27 | 4 | 59 | 20          | 131  | 46 | 33 | 5 | 13 |
| 30          | 125  | 48 | 46 | 5 | 0  | 30          | 131  | 56 | 41 | 5 | 13 |
| 40          | 125  | 59 | 5  | 5 | 0  | 40          | 132  | 6  | 49 | 5 | 14 |
| 50          | 126  | 9  | 23 | 5 | 1  | 50          | 132  | 16 | 56 | 5 | 14 |
| 4           | 126  | 19 | 41 | 5 | 1  | 10          | 132  | 27 | 3  | 5 | 14 |
| 10          | 126  | 29 | 59 | 5 | 2  | 10          | 132  | 37 | 10 | 5 | 14 |
| 20          | 126  | 40 | 16 | 5 | 2  | 20          | 132  | 47 | 16 | 5 | 14 |
| 30          | 126  | 50 | 33 | 5 | 3  | 30          | 132  | 57 | 22 | 5 | 14 |
| 40          | 127  | 0  | 50 | 5 | 3  | 40          | 133  | 7  | 28 | 5 | 15 |
| 50          | 127  | 11 | 6  | 5 | 4  | 50          | 133  | 17 | 34 | 5 | 15 |
| 5           | 127  | 21 | 22 | 5 | 4  | 11          | 133  | 27 | 39 | 5 | 15 |
| 10          | 127  | 31 | 38 | 5 | 5  | 10          | 133  | 37 | 44 | 5 | 15 |
| 20          | 127  | 41 | 53 | 5 | 5  | 20          | 133  | 47 | 49 | 5 | 15 |
| 30          | 127  | 52 | 8  | 5 | 6  | 30          | 133  | 57 | 53 | 5 | 15 |
| 40          | 128  | 2  | 23 | 5 | 6  | 40          | 134  | 7  | 56 | 5 | 15 |
| 50          | 128  | 12 | 38 | 5 | 7  | 50          | 134  | 18 | 1  | 5 | 15 |
| 6           | 128  | 22 | 52 | 5 | 7  | 12          | 134  | 28 | 4  | 5 | 15 |
| Adde        |      |    |    |   |    | Adde        |      |    |    |   |    |



# CANON ASCENSIONVM

| Ω  |    |      |    |    |   | Differ. |    |    |      |    |    | Ω |    |      |    |      |    | Differ. |   |    |     |  |      |      |    |   |    |  |  |  |  |  |  |
|----|----|------|----|----|---|---------|----|----|------|----|----|---|----|------|----|------|----|---------|---|----|-----|--|------|------|----|---|----|--|--|--|--|--|--|
|    |    | tem. | /  | // | / | //      |    |    | tem. | /  | // | / | // |      |    | tem. | /  | //      | / | // |     |  | tem. | /    | // | / | // |  |  |  |  |  |  |
| 12 |    | 134  | 28 | 4  | 5 | 15      | 18 |    | 140  | 26 | 44 | 5 | 10 | 10   |    | 140  | 36 | 36      | 5 | 10 | 20  |  | 140  | 46   | 28 | 5 | 9  |  |  |  |  |  |  |
|    | 10 | 134  | 38 | 7  | 5 | 15      |    | 10 | 140  | 36 | 36 | 5 | 10 |      | 30 | 140  | 56 | 20      | 5 | 9  |     |  |      |      |    |   |    |  |  |  |  |  |  |
| 20 |    | 134  | 48 | 10 | 5 | 15      | 20 |    | 140  | 46 | 28 | 5 | 9  | 30   |    | 140  | 56 | 20      | 5 | 9  | 40  |  | 141  | 6    | 11 | 5 | 9  |  |  |  |  |  |  |
| 30 |    | 134  | 58 | 12 | 5 | 16      | 30 |    | 140  | 56 | 20 | 5 | 9  | 40   |    | 141  | 6  | 11      | 5 | 9  | 50  |  | 141  | 16   | 2  | 5 | 8  |  |  |  |  |  |  |
| 40 |    | 135  | 8  | 14 | 5 | 16      | 40 |    | 141  | 6  | 11 | 5 | 9  | 50   |    | 141  | 16 | 2       | 5 | 8  | 13  |  | 135  | 28   | 17 | 5 | 16 |  |  |  |  |  |  |
| 50 |    | 135  | 18 | 16 | 5 | 16      | 50 |    | 141  | 16 | 2  | 5 | 8  | 10   |    | 141  | 35 | 44      | 5 | 8  | 10  |  | 135  | 38   | 18 | 5 | 16 |  |  |  |  |  |  |
| 13 |    | 135  | 28 | 17 | 5 | 16      | 19 |    | 141  | 25 | 53 | 5 | 8  | 20   |    | 141  | 45 | 34      | 5 | 7  | 20  |  | 135  | 48   | 19 | 5 | 16 |  |  |  |  |  |  |
|    | 10 | 135  | 38 | 18 | 5 | 16      |    | 10 | 141  | 35 | 44 | 5 | 8  | 30   |    | 141  | 55 | 24      | 5 | 7  | 30  |  | 135  | 58   | 20 | 5 | 16 |  |  |  |  |  |  |
| 20 |    | 135  | 48 | 19 | 5 | 16      | 20 |    | 141  | 45 | 34 | 5 | 7  | 40   |    | 142  | 5  | 14      | 5 | 6  | 40  |  | 136  | 8    | 20 | 5 | 15 |  |  |  |  |  |  |
| 30 |    | 135  | 58 | 20 | 5 | 16      | 30 |    | 141  | 55 | 24 | 5 | 7  | 50   |    | 142  | 15 | 4       | 5 | 6  | 50  |  | 136  | 18   | 20 | 5 | 15 |  |  |  |  |  |  |
| 40 |    | 136  | 8  | 20 | 5 | 15      | 40 |    | 142  | 5  | 14 | 5 | 6  | 142  |    | 142  | 24 | 53      | 5 | 5  | 142 |  | 136  | 28   | 20 | 5 | 15 |  |  |  |  |  |  |
| 50 |    | 136  | 18 | 20 | 5 | 15      | 50 |    | 142  | 15 | 4  | 5 | 6  | 142  |    | 142  | 34 | 42      | 5 | 5  | 10  |  | 136  | 38   | 19 | 5 | 15 |  |  |  |  |  |  |
| 14 |    | 136  | 28 | 20 | 5 | 15      | 20 |    | 142  | 24 | 53 | 5 | 5  | 20   |    | 142  | 44 | 30      | 5 | 4  | 20  |  | 136  | 48   | 18 | 5 | 15 |  |  |  |  |  |  |
|    | 10 | 136  | 38 | 19 | 5 | 15      |    | 10 | 142  | 34 | 42 | 5 | 5  | 30   |    | 142  | 54 | 18      | 5 | 4  | 30  |  | 136  | 58   | 17 | 5 | 15 |  |  |  |  |  |  |
| 20 |    | 136  | 48 | 18 | 5 | 15      | 20 |    | 142  | 44 | 30 | 5 | 4  | 40   |    | 143  | 4  | 6       | 5 | 3  | 40  |  | 137  | 8    | 16 | 5 | 15 |  |  |  |  |  |  |
| 30 |    | 136  | 58 | 17 | 5 | 15      | 30 |    | 142  | 54 | 18 | 5 | 4  | 50   |    | 143  | 13 | 54      | 5 | 3  | 50  |  | 137  | 18   | 14 | 5 | 15 |  |  |  |  |  |  |
| 40 |    | 137  | 8  | 16 | 5 | 15      | 40 |    | 143  | 4  | 6  | 5 | 3  | 143  |    | 143  | 23 | 41      | 5 | 2  | 143 |  | 137  | 28   | 12 | 5 | 15 |  |  |  |  |  |  |
| 50 |    | 137  | 18 | 14 | 5 | 15      | 50 |    | 143  | 13 | 54 | 5 | 3  | 143  |    | 143  | 33 | 18      | 5 | 2  | 10  |  | 137  | 38   | 10 | 5 | 14 |  |  |  |  |  |  |
| 15 |    | 137  | 28 | 12 | 5 | 15      | 21 |    | 143  | 23 | 41 | 5 | 2  | 20   |    | 143  | 43 | 15      | 5 | 1  | 20  |  | 137  | 48   | 8  | 5 | 14 |  |  |  |  |  |  |
|    | 10 | 137  | 38 | 10 | 5 | 14      |    | 10 | 143  | 33 | 18 | 5 | 2  | 30   |    | 143  | 53 | 2       | 5 | 1  | 30  |  | 137  | 58   | 5  | 5 | 14 |  |  |  |  |  |  |
| 20 |    | 137  | 48 | 8  | 5 | 14      | 20 |    | 143  | 43 | 15 | 5 | 1  | 40   |    | 144  | 2  | 48      | 5 | 0  | 40  |  | 138  | 8    | 2  | 5 | 14 |  |  |  |  |  |  |
| 30 |    | 137  | 58 | 5  | 5 | 14      | 30 |    | 143  | 53 | 2  | 5 | 1  | 50   |    | 144  | 12 | 34      | 4 | 59 | 50  |  | 138  | 17   | 58 | 5 | 14 |  |  |  |  |  |  |
| 40 |    | 138  | 8  | 2  | 5 | 14      | 40 |    | 144  | 2  | 48 | 5 | 0  | 144  |    | 144  | 22 | 20      | 4 | 59 | 144 |  | 138  | 27   | 54 | 5 | 13 |  |  |  |  |  |  |
| 50 |    | 138  | 17 | 58 | 5 | 14      | 50 |    | 144  | 12 | 34 | 4 | 59 | 144  |    | 144  | 32 | 5       | 4 | 58 | 10  |  | 138  | 37   | 50 | 5 | 13 |  |  |  |  |  |  |
| 16 |    | 138  | 27 | 54 | 5 | 13      | 22 |    | 144  | 22 | 20 | 4 | 59 | 20   |    | 144  | 41 | 50      | 4 | 58 | 20  |  | 138  | 47   | 45 | 5 | 13 |  |  |  |  |  |  |
|    | 10 | 138  | 37 | 50 | 5 | 13      |    | 10 | 144  | 32 | 5  | 4 | 58 | 30   |    | 144  | 51 | 35      | 4 | 57 | 30  |  | 138  | 57   | 40 | 5 | 13 |  |  |  |  |  |  |
| 20 |    | 138  | 47 | 45 | 5 | 13      | 20 |    | 144  | 41 | 50 | 4 | 58 | 40   |    | 145  | 1  | 19      | 4 | 56 | 40  |  | 139  | 7    | 35 | 5 | 12 |  |  |  |  |  |  |
| 30 |    | 138  | 57 | 40 | 5 | 13      | 30 |    | 144  | 51 | 35 | 4 | 57 | 50   |    | 145  | 11 | 3       | 4 | 56 | 50  |  | 139  | 17   | 20 | 5 | 12 |  |  |  |  |  |  |
| 40 |    | 139  | 7  | 35 | 5 | 12      | 40 |    | 145  | 1  | 19 | 4 | 56 | 145  |    | 145  | 20 | 47      | 4 | 55 | 145 |  | 139  | 27   | 24 | 5 | 12 |  |  |  |  |  |  |
| 50 |    | 139  | 17 | 20 | 5 | 12      | 50 |    | 145  | 11 | 3  | 4 | 56 | 10   |    | 145  | 30 | 31      | 4 | 54 | 10  |  | 139  | 37   | 18 | 5 | 12 |  |  |  |  |  |  |
| 17 |    | 139  | 27 | 24 | 5 | 12      | 23 |    | 145  | 20 | 47 | 4 | 55 | 20   |    | 145  | 40 | 14      | 4 | 54 | 20  |  | 139  | 47   | 12 | 5 | 11 |  |  |  |  |  |  |
|    | 10 | 139  | 37 | 18 | 5 | 12      |    | 10 | 145  | 30 | 31 | 4 | 54 | 30   |    | 145  | 49 | 57      | 4 | 53 | 30  |  | 139  | 57   | 5  | 5 | 11 |  |  |  |  |  |  |
| 20 |    | 139  | 47 | 12 | 5 | 11      | 20 |    | 145  | 40 | 14 | 4 | 54 | 40   |    | 146  | 59 | 40      | 4 | 52 | 40  |  | 140  | 6    | 58 | 5 | 11 |  |  |  |  |  |  |
| 30 |    | 139  | 57 | 5  | 5 | 11      | 30 |    | 145  | 49 | 57 | 4 | 53 | 50   |    | 146  | 5  | 23      | 4 | 52 | 50  |  | 140  | 16   | 51 | 5 | 10 |  |  |  |  |  |  |
| 40 |    | 140  | 6  | 58 | 5 | 11      | 40 |    | 146  | 59 | 40 | 4 | 52 | 146  |    | 146  | 19 | 6       | 4 | 51 | 146 |  | 140  | 26   | 44 | 5 | 10 |  |  |  |  |  |  |
| 50 |    | 140  | 16 | 51 | 5 | 10      | 50 |    | 146  | 5  | 23 | 4 | 52 | 24   |    | 146  | 19 | 6       | 4 | 51 | 24  |  | 140  | 36   | 36 | 5 | 10 |  |  |  |  |  |  |
| 18 |    | 140  | 26 | 44 | 5 | 10      | 24 |    | 146  | 19 | 6  | 4 | 51 | Adde |    |      |    |         |   |    |     |  |      | Adde |    |   |    |  |  |  |  |  |  |



| Ω    |     |    |    |   |    | Dra. |  | η    |    |    |    |    |    | Dra. |  |
|------|-----|----|----|---|----|------|--|------|----|----|----|----|----|------|--|
| tem. |     | /  | // | / | // |      |  | tem. |    | /  | // | /  | // |      |  |
| 24   | 146 | 19 | 6  | 4 | 51 | 0    |  | 152  | 5  | 40 | 4  | 21 |    |      |  |
| 10   | 146 | 28 | 48 | 4 | 50 | 10   |  | 152  | 15 | 13 | 4  | 20 |    |      |  |
| 20   | 146 | 38 | 30 | 4 | 50 | 20   |  | 152  | 24 | 46 | 4  | 19 |    |      |  |
| 30   | 146 | 48 | 12 | 4 | 49 | 30   |  | 152  | 34 | 18 | 4  | 18 |    |      |  |
| 40   | 146 | 57 | 53 | 4 | 48 | 40   |  | 152  | 43 | 50 | 4  | 17 |    |      |  |
| 50   | 147 | 7  | 34 | 4 | 47 | 50   |  | 152  | 53 | 22 | 4  | 16 |    |      |  |
| 25   | 147 | 17 | 15 | 4 | 47 | 1    |  | 153  | 2  | 54 | 4  | 15 |    |      |  |
| 10   | 147 | 26 | 56 | 4 | 46 | 10   |  | 153  | 12 | 26 | 4  | 14 |    |      |  |
| 20   | 147 | 36 | 37 | 4 | 45 | 20   |  | 153  | 21 | 57 | 4  | 13 |    |      |  |
| 30   | 147 | 46 | 17 | 4 | 45 | 30   |  | 153  | 31 | 28 | 4  | 12 |    |      |  |
| 40   | 147 | 55 | 56 | 4 | 44 | 40   |  | 153  | 40 | 59 | 4  | 10 |    |      |  |
| 50   | 148 | 5  | 36 | 4 | 43 | 50   |  | 153  | 50 | 30 | 4  | 9  |    |      |  |
| 26   | 148 | 15 | 14 | 4 | 42 | 2    |  | 154  | 0  | 0  | 4  | 8  |    |      |  |
| 10   | 148 | 24 | 53 | 4 | 41 | 10   |  | 154  | 9  | 30 | 4  | 7  |    |      |  |
| 20   | 148 | 34 | 32 | 4 | 40 | 20   |  | 154  | 19 | 0  | 4  | 6  |    |      |  |
| 30   | 148 | 44 | 10 | 4 | 39 | 30   |  | 154  | 28 | 30 | 4  | 5  |    |      |  |
| 40   | 148 | 53 | 48 | 4 | 38 | 40   |  | 154  | 38 | 0  | 4  | 4  |    |      |  |
| 50   | 149 | 3  | 26 | 4 | 38 | 50   |  | 154  | 47 | 29 | 4  | 3  |    |      |  |
| 27   | 149 | 13 | 4  | 4 | 37 | 3    |  | 154  | 56 | 58 | 4  | 2  |    |      |  |
| 10   | 149 | 22 | 41 | 4 | 36 | 10   |  | 155  | 6  | 27 | 4  | 1  |    |      |  |
| 20   | 149 | 32 | 18 | 4 | 35 | 20   |  | 155  | 15 | 56 | 4  | 0  |    |      |  |
| 30   | 149 | 41 | 55 | 4 | 34 | 30   |  | 155  | 25 | 24 | 3  | 59 |    |      |  |
| 40   | 149 | 51 | 32 | 4 | 34 | 40   |  | 155  | 34 | 52 | 3  | 57 |    |      |  |
| 50   | 150 | 1  | 9  | 4 | 33 | 50   |  | 155  | 44 | 20 | 3  | 56 |    |      |  |
| 28   | 150 | 10 | 45 | 4 | 32 | 4    |  | 155  | 53 | 48 | 3  | 55 |    |      |  |
| 10   | 150 | 20 | 21 | 4 | 31 | 10   |  | 156  | 3  | 15 | 3  | 54 |    |      |  |
| 20   | 150 | 29 | 57 | 4 | 30 | 20   |  | 156  | 12 | 42 | 3  | 53 |    |      |  |
| 30   | 150 | 39 | 32 | 4 | 29 | 30   |  | 156  | 22 | 9  | 3  | 52 |    |      |  |
| 40   | 150 | 49 | 7  | 4 | 29 | 40   |  | 156  | 31 | 36 | 3  | 51 |    |      |  |
| 50   | 150 | 58 | 42 | 4 | 28 | 50   |  | 156  | 41 | 3  | 2  | 49 |    |      |  |
| 29   | 151 | 8  | 17 | 4 | 27 | 5    |  | 156  | 50 | 30 | 3  | 48 |    |      |  |
| 10   | 151 | 17 | 51 | 4 | 26 | 10   |  | 156  | 59 | 56 | 3  | 47 |    |      |  |
| 20   | 151 | 27 | 25 | 4 | 25 | 20   |  | 157  | 9  | 22 | 3  | 46 |    |      |  |
| 30   | 151 | 36 | 59 | 4 | 24 | 30   |  | 157  | 18 | 48 | 3  | 45 |    |      |  |
| 40   | 151 | 46 | 33 | 4 | 23 | 40   |  | 157  | 28 | 14 | 3  | 43 |    |      |  |
| 50   | 151 | 56 | 7  | 4 | 22 | 50   |  | 157  | 37 | 40 | 3  | 42 |    |      |  |
| 30   | 152 | 5  | 40 | 4 | 21 | 6    |  | 157  | 47 | 5  | 3  | 41 |    |      |  |
|      |     |    |    |   |    | Adde |  |      |    |    |    |    |    | Adde |  |



# CANON ASCENSIONVM

| ny   |    |     |    |    |    | Differ. |    |    |     |     |    | ny   |    |    |    |     |    | Differ. |   |    |  |  |  |
|------|----|-----|----|----|----|---------|----|----|-----|-----|----|------|----|----|----|-----|----|---------|---|----|--|--|--|
| tem. |    | /   | // | /  | // | tem.    |    | /  | //  | /   | // | tem. |    | /  | // | /   | // |         |   |    |  |  |  |
| 6    |    | 157 | 47 | 5  | 3  | 41      | 12 |    | 163 | 24  | 13 | 2    | 52 | 10 |    | 163 | 33 | 32      | 2 | 51 |  |  |  |
|      | 10 | 157 | 56 | 30 | 3  | 40      |    |    | 163 | 33  | 32 | 2    | 51 |    |    |     |    |         |   |    |  |  |  |
| 20   |    | 158 | 5  | 55 | 3  | 39      | 20 |    | 163 | 42  | 51 | 2    | 50 |    |    |     |    |         |   |    |  |  |  |
| 30   |    | 158 | 15 | 20 | 3  | 37      | 30 |    | 163 | 52  | 9  | 2    | 48 |    |    |     |    |         |   |    |  |  |  |
| 40   |    | 158 | 24 | 45 | 3  | 36      | 40 |    | 164 | 1   | 27 | 2    | 47 |    |    |     |    |         |   |    |  |  |  |
| 50   |    | 158 | 34 | 9  | 3  | 35      | 50 |    | 164 | 10  | 45 | 2    | 45 |    |    |     |    |         |   |    |  |  |  |
| 7    |    | 158 | 43 | 33 | 3  | 33      | 13 |    | 164 | 20  | 3  | 2    | 44 |    |    |     |    |         |   |    |  |  |  |
|      | 10 | 158 | 52 | 57 | 3  | 32      |    | 10 |     | 164 | 29 | 21   | 2  | 42 |    |     |    |         |   |    |  |  |  |
| 20   |    | 159 | 2  | 21 | 3  | 31      | 20 |    | 164 | 38  | 39 | 2    | 41 |    |    |     |    |         |   |    |  |  |  |
| 30   |    | 159 | 11 | 44 | 3  | 29      | 30 |    | 164 | 47  | 57 | 2    | 39 |    |    |     |    |         |   |    |  |  |  |
| 40   |    | 159 | 21 | 7  | 3  | 28      | 40 |    | 164 | 57  | 14 | 2    | 38 |    |    |     |    |         |   |    |  |  |  |
| 50   |    | 159 | 30 | 30 | 3  | 27      | 50 |    | 165 | 6   | 31 | 2    | 36 |    |    |     |    |         |   |    |  |  |  |
| 8    |    | 159 | 39 | 53 | 3  | 25      | 14 |    | 165 | 15  | 48 | 2    | 35 |    |    |     |    |         |   |    |  |  |  |
|      | 10 | 159 | 49 | 16 | 3  | 24      |    | 10 |     | 165 | 25 | 5    | 2  | 33 |    |     |    |         |   |    |  |  |  |
| 20   |    | 159 | 58 | 39 | 3  | 23      | 20 |    | 165 | 34  | 22 | 2    | 32 |    |    |     |    |         |   |    |  |  |  |
| 30   |    | 160 | 8  | 1  | 3  | 21      | 30 |    | 165 | 43  | 39 | 2    | 30 |    |    |     |    |         |   |    |  |  |  |
| 40   |    | 160 | 17 | 23 | 3  | 20      | 40 |    | 165 | 52  | 56 | 2    | 29 |    |    |     |    |         |   |    |  |  |  |
| 50   |    | 160 | 26 | 45 | 3  | 19      | 50 |    | 166 | 2   | 12 | 2    | 27 |    |    |     |    |         |   |    |  |  |  |
| 9    |    | 160 | 36 | 7  | 3  | 17      | 15 |    | 166 | 11  | 28 | 2    | 26 |    |    |     |    |         |   |    |  |  |  |
|      | 10 | 160 | 45 | 29 | 3  | 16      |    | 10 |     | 166 | 20 | 44   | 2  | 24 |    |     |    |         |   |    |  |  |  |
| 20   |    | 160 | 54 | 51 | 3  | 15      | 20 |    | 166 | 30  | 0  | 2    | 23 |    |    |     |    |         |   |    |  |  |  |
| 30   |    | 161 | 4  | 12 | 3  | 13      | 30 |    | 166 | 39  | 16 | 2    | 21 |    |    |     |    |         |   |    |  |  |  |
| 40   |    | 161 | 13 | 33 | 3  | 12      | 40 |    | 166 | 48  | 32 | 2    | 20 |    |    |     |    |         |   |    |  |  |  |
| 50   |    | 161 | 22 | 54 | 3  | 11      | 50 |    | 166 | 57  | 48 | 2    | 18 |    |    |     |    |         |   |    |  |  |  |
| 10   |    | 161 | 32 | 15 | 3  | 9       | 16 |    | 167 | 7   | 3  | 2    | 17 |    |    |     |    |         |   |    |  |  |  |
|      | 10 | 161 | 41 | 36 | 3  | 8       |    | 10 |     | 197 | 16 | 19   | 2  | 15 |    |     |    |         |   |    |  |  |  |
| 20   |    | 161 | 50 | 57 | 3  | 6       | 20 |    | 167 | 25  | 34 | 2    | 14 |    |    |     |    |         |   |    |  |  |  |
| 30   |    | 162 | 0  | 17 | 3  | 5       | 30 |    | 167 | 34  | 49 | 2    | 12 |    |    |     |    |         |   |    |  |  |  |
| 40   |    | 162 | 9  | 37 | 3  | 4       | 40 |    | 167 | 44  | 4  | 2    | 11 |    |    |     |    |         |   |    |  |  |  |
| 50   |    | 162 | 18 | 57 | 3  | 2       | 50 |    | 167 | 53  | 19 | 2    | 9  |    |    |     |    |         |   |    |  |  |  |
| 11   |    | 162 | 28 | 17 | 3  | 1       | 17 |    | 168 | 2   | 34 | 2    | 8  |    |    |     |    |         |   |    |  |  |  |
|      | 10 | 162 | 37 | 37 | 2  | 59      |    | 10 |     | 168 | 11 | 49   | 2  | 6  |    |     |    |         |   |    |  |  |  |
| 20   |    | 162 | 46 | 57 | 2  | 58      | 20 |    | 168 | 21  | 4  | 2    | 5  |    |    |     |    |         |   |    |  |  |  |
| 30   |    | 162 | 56 | 16 | 2  | 56      | 30 |    | 168 | 30  | 19 | 2    | 3  |    |    |     |    |         |   |    |  |  |  |
| 40   |    | 163 | 5  | 35 | 2  | 55      | 40 |    | 168 | 39  | 34 | 2    | 1  |    |    |     |    |         |   |    |  |  |  |
| 50   |    | 163 | 14 | 54 | 2  | 54      | 50 |    | 168 | 48  | 48 | 1    | 59 |    |    |     |    |         |   |    |  |  |  |
| 12   |    | 163 | 24 | 13 | 2  | 52      | 18 |    | 168 | 58  | 2  | 1    | 58 |    |    |     |    |         |   |    |  |  |  |
| Adde |    |     |    |    |    | Adde    |    |    |     |     |    |      |    |    |    |     |    |         |   |    |  |  |  |



| 11p |     |      |    |   |    | 11p  |     |      |    |   |    | 11p |     |      |    |   |    | Dra. |     |    |    |   |    |
|-----|-----|------|----|---|----|------|-----|------|----|---|----|-----|-----|------|----|---|----|------|-----|----|----|---|----|
|     |     | tem. |    | / | // |      |     | tem. |    | / | // |     |     | tem. |    | / | // |      |     |    |    |   |    |
| 18  | 168 | 58   | 2  | 1 | 58 | 24   | 174 | 29   | 35 | 1 | 0  | 10  | 169 | 7    | 16 | 1 | 56 | 10   | 174 | 38 | 47 | 0 | 59 |
| 20  | 169 | 16   | 30 | 1 | 55 | 20   | 174 | 47   | 58 | 0 | 57 | 30  | 169 | 25   | 44 | 1 | 53 | 30   | 174 | 57 | 9  | 0 | 55 |
| 40  | 169 | 34   | 58 | 1 | 52 | 40   | 175 | 6    | 20 | 0 | 54 | 50  | 169 | 44   | 12 | 1 | 50 | 50   | 175 | 15 | 31 | 0 | 52 |
| 19  | 169 | 53   | 25 | 1 | 49 | 25   | 175 | 24   | 42 | 0 | 50 | 10  | 170 | 2    | 39 | 1 | 47 | 10   | 175 | 33 | 53 | 0 | 49 |
| 20  | 170 | 11   | 52 | 1 | 46 | 20   | 175 | 43   | 4  | 0 | 47 | 30  | 170 | 21   | 5  | 1 | 44 | 30   | 175 | 52 | 15 | 0 | 45 |
| 40  | 170 | 30   | 19 | 1 | 43 | 40   | 176 | 1    | 26 | 0 | 44 | 50  | 170 | 39   | 32 | 1 | 41 | 50   | 176 | 10 | 36 | 0 | 42 |
| 20  | 170 | 48   | 45 | 1 | 40 | 26   | 176 | 19   | 47 | 0 | 40 | 10  | 170 | 57   | 48 | 1 | 38 | 10   | 176 | 28 | 58 | 0 | 39 |
| 20  | 171 | 7    | 10 | 1 | 37 | 20   | 176 | 38   | 9  | 0 | 37 | 30  | 171 | 16   | 23 | 1 | 35 | 30   | 176 | 47 | 20 | 0 | 35 |
| 40  | 171 | 25   | 36 | 1 | 33 | 40   | 176 | 56   | 31 | 0 | 34 | 50  | 171 | 34   | 48 | 1 | 32 | 50   | 177 | 5  | 42 | 0 | 32 |
| 21  | 171 | 44   | 1  | 1 | 30 | 27   | 177 | 14   | 52 | 0 | 30 | 10  | 171 | 53   | 14 | 1 | 29 | 10   | 177 | 24 | 3  | 0 | 29 |
| 20  | 172 | 2    | 26 | 1 | 27 | 20   | 177 | 33   | 13 | 0 | 27 | 30  | 172 | 11   | 38 | 1 | 25 | 30   | 177 | 42 | 24 | 0 | 25 |
| 40  | 172 | 20   | 51 | 1 | 24 | 40   | 177 | 51   | 34 | 0 | 24 | 50  | 172 | 30   | 3  | 1 | 22 | 50   | 178 | 0  | 45 | 0 | 22 |
| 22  | 172 | 39   | 15 | 1 | 20 | 28   | 178 | 9    | 55 | 0 | 20 | 10  | 172 | 48   | 27 | 1 | 19 | 10   | 178 | 19 | 6  | 0 | 19 |
| 20  | 172 | 57   | 39 | 1 | 17 | 20   | 178 | 28   | 17 | 0 | 17 | 30  | 173 | 6    | 51 | 1 | 15 | 30   | 178 | 37 | 27 | 0 | 15 |
| 40  | 173 | 16   | 2  | 1 | 14 | 40   | 178 | 46   | 38 | 0 | 14 | 50  | 173 | 25   | 14 | 1 | 12 | 50   | 178 | 55 | 48 | 0 | 12 |
| 23  | 173 | 34   | 26 | 1 | 10 | 29   | 179 | 4    | 58 | 0 | 10 | 10  | 173 | 43   | 38 | 1 | 9  | 10   | 179 | 14 | 9  | 0 | 9  |
| 20  | 173 | 52   | 49 | 1 | 7  | 20   | 179 | 23   | 19 | 0 | 7  | 30  | 174 | 2    | 11 | 1 | 5  | 30   | 179 | 32 | 29 | 0 | 5  |
| 40  | 174 | 11   | 12 | 1 | 4  | 40   | 179 | 41   | 40 | 0 | 4  | 50  | 174 | 20   | 24 | 1 | 2  | 50   | 179 | 50 | 50 | 0 | 2  |
| 24  | 174 | 29   | 35 | 1 | 0  | 30   | 180 | 0    | 0  | 0 | 0  |     |     |      |    |   |    |      |     |    |    |   |    |
|     |     |      |    |   |    | Adde |     |      |    |   |    |     |     |      |    |   |    | Adde |     |    |    |   |    |



CANON ASCENSIONVM

| 2    |     |    |    |    |    | 3    |     |    |    |    |    |
|------|-----|----|----|----|----|------|-----|----|----|----|----|
| tem. | /   | // | /  | // |    | tem. | /   | // | /  | // |    |
| 0    | 180 | 0  | 0  | 0  | 0  | 6    | 185 | 30 | 25 | 1  | 0  |
| 10   | 180 | 9  | 10 | 0  | 2  | 10   | 185 | 39 | 36 | 1  | 2  |
| 20   | 180 | 18 | 20 | 0  | 4  | 20   | 185 | 48 | 48 | 1  | 4  |
| 30   | 180 | 27 | 31 | 0  | 5  | 30   | 185 | 57 | 59 | 1  | 5  |
| 40   | 180 | 36 | 41 | 0  | 7  | 40   | 186 | 7  | 11 | 1  | 7  |
| 50   | 180 | 45 | 51 | 0  | 9  | 50   | 186 | 16 | 22 | 1  | 9  |
| 1    | 180 | 55 | 2  | 0  | 10 | 7    | 186 | 25 | 34 | 1  | 10 |
| 10   | 181 | 4  | 12 | 0  | 12 | 10   | 186 | 34 | 46 | 1  | 12 |
| 20   | 181 | 13 | 22 | 0  | 14 | 20   | 186 | 43 | 58 | 1  | 14 |
| 30   | 181 | 22 | 33 | 0  | 15 | 30   | 186 | 53 | 9  | 1  | 15 |
| 40   | 181 | 31 | 43 | 0  | 17 | 40   | 187 | 2  | 21 | 1  | 17 |
| 50   | 181 | 40 | 54 | 0  | 19 | 50   | 187 | 11 | 33 | 1  | 19 |
| 2    | 181 | 50 | 5  | 0  | 20 | 8    | 187 | 20 | 45 | 1  | 20 |
| 10   | 181 | 59 | 15 | 0  | 22 | 10   | 187 | 29 | 57 | 1  | 22 |
| 20   | 182 | 8  | 26 | 0  | 24 | 20   | 187 | 39 | 9  | 1  | 24 |
| 30   | 182 | 17 | 36 | 0  | 25 | 30   | 187 | 48 | 22 | 1  | 25 |
| 40   | 182 | 26 | 47 | 0  | 27 | 40   | 187 | 57 | 34 | 1  | 27 |
| 50   | 182 | 35 | 57 | 0  | 29 | 50   | 188 | 6  | 46 | 1  | 29 |
| 3    | 182 | 45 | 8  | 0  | 30 | 9    | 188 | 15 | 59 | 1  | 30 |
| 10   | 182 | 54 | 18 | 0  | 32 | 10   | 188 | 25 | 12 | 1  | 32 |
| 20   | 183 | 3  | 29 | 0  | 34 | 20   | 188 | 34 | 23 | 1  | 33 |
| 30   | 183 | 12 | 40 | 0  | 35 | 30   | 188 | 43 | 37 | 1  | 35 |
| 40   | 183 | 21 | 51 | 0  | 37 | 40   | 188 | 52 | 50 | 1  | 37 |
| 50   | 183 | 31 | 2  | 0  | 39 | 50   | 189 | 2  | 2  | 1  | 38 |
| 4    | 183 | 40 | 13 | 0  | 40 | 10   | 189 | 11 | 15 | 1  | 40 |
| 10   | 183 | 49 | 24 | 0  | 42 | 10   | 189 | 20 | 28 | 1  | 41 |
| 20   | 183 | 58 | 34 | 0  | 44 | 20   | 189 | 29 | 41 | 1  | 43 |
| 30   | 184 | 7  | 45 | 0  | 45 | 30   | 189 | 38 | 55 | 1  | 44 |
| 40   | 184 | 16 | 56 | 0  | 47 | 40   | 189 | 48 | 8  | 1  | 46 |
| 50   | 184 | 26 | 7  | 0  | 49 | 50   | 189 | 57 | 21 | 1  | 47 |
| 5    | 184 | 35 | 18 | 0  | 50 | 11   | 190 | 6  | 35 | 1  | 49 |
| 10   | 184 | 44 | 29 | 0  | 52 | 10   | 190 | 15 | 48 | 1  | 50 |
| 20   | 184 | 53 | 40 | 0  | 54 | 20   | 190 | 25 | 2  | 1  | 52 |
| 30   | 185 | 2  | 51 | 0  | 55 | 30   | 190 | 34 | 16 | 1  | 53 |
| 40   | 185 | 12 | 2  | 0  | 57 | 40   | 190 | 43 | 30 | 1  | 55 |
| 50   | 185 | 21 | 13 | 0  | 59 | 50   | 190 | 52 | 44 | 1  | 56 |
| 6    | 185 | 30 | 25 | 1  | 0  | 12   | 191 | 1  | 58 | 1  | 58 |
| Sub. |     |    |    |    |    | Sub. |     |    |    |    |    |



| ☾         |      |    |    |   |    | ☽         |      |    |    |   |    |
|-----------|------|----|----|---|----|-----------|------|----|----|---|----|
|           | tem. | /  | // | / | // |           | tem. | /  | // | / | // |
| <b>12</b> | 191  | 1  | 58 | 1 | 58 | <b>18</b> | 196  | 35 | 47 | 2 | 52 |
| 10        | 191  | 11 | 12 | 1 | 59 | 10        | 196  | 45 | 6  | 2 | 54 |
| 20        | 191  | 20 | 26 | 2 | 1  | 20        | 196  | 54 | 25 | 2 | 55 |
| 30        | 191  | 29 | 41 | 2 | 3  | 30        | 197  | 3  | 44 | 2 | 56 |
| 40        | 191  | 38 | 56 | 2 | 5  | 40        | 197  | 13 | 3  | 2 | 58 |
| 50        | 191  | 48 | 11 | 2 | 6  | 50        | 197  | 22 | 23 | 2 | 59 |
| <b>13</b> | 191  | 57 | 26 | 2 | 8  | <b>19</b> | 197  | 31 | 43 | 3 | 1  |
| 10        | 191  | 6  | 41 | 2 | 9  | 10        | 197  | 41 | 3  | 3 | 2  |
| 20        | 192  | 15 | 56 | 2 | 11 | 20        | 197  | 50 | 23 | 3 | 4  |
| 30        | 192  | 25 | 11 | 2 | 12 | 30        | 197  | 59 | 43 | 3 | 5  |
| 40        | 192  | 34 | 26 | 2 | 14 | 40        | 198  | 9  | 3  | 3 | 6  |
| 50        | 192  | 43 | 41 | 2 | 15 | 50        | 198  | 18 | 24 | 3 | 8  |
| <b>14</b> | 192  | 52 | 57 | 2 | 17 | <b>20</b> | 198  | 27 | 45 | 3 | 9  |
| 10        | 193  | 2  | 12 | 2 | 18 | 10        | 198  | 37 | 6  | 2 | 11 |
| 20        | 193  | 11 | 28 | 2 | 20 | 20        | 198  | 46 | 27 | 3 | 12 |
| 30        | 193  | 20 | 44 | 2 | 21 | 30        | 198  | 55 | 48 | 3 | 13 |
| 40        | 193  | 30 | 0  | 2 | 23 | 40        | 199  | 5  | 9  | 3 | 15 |
| 50        | 193  | 39 | 16 | 2 | 24 | 50        | 199  | 14 | 31 | 3 | 16 |
| <b>15</b> | 193  | 48 | 32 | 2 | 26 | <b>21</b> | 199  | 23 | 53 | 3 | 17 |
| 10        | 193  | 57 | 48 | 2 | 27 | 10        | 199  | 33 | 15 | 3 | 19 |
| 20        | 194  | 7  | 4  | 2 | 29 | 20        | 199  | 42 | 37 | 3 | 20 |
| 30        | 194  | 16 | 21 | 2 | 30 | 30        | 199  | 51 | 59 | 3 | 21 |
| 40        | 194  | 25 | 38 | 2 | 32 | 40        | 200  | 1  | 21 | 3 | 23 |
| 50        | 194  | 34 | 55 | 2 | 32 | 50        | 200  | 10 | 44 | 3 | 24 |
| <b>16</b> | 194  | 44 | 12 | 2 | 35 | <b>22</b> | 200  | 20 | 7  | 3 | 25 |
| 10        | 194  | 53 | 29 | 2 | 36 | 10        | 200  | 29 | 30 | 3 | 27 |
| 20        | 195  | 2  | 46 | 2 | 38 | 20        | 200  | 38 | 53 | 3 | 28 |
| 30        | 195  | 12 | 3  | 2 | 39 | 30        | 200  | 48 | 16 | 3 | 29 |
| 40        | 195  | 21 | 21 | 2 | 41 | 40        | 200  | 57 | 39 | 3 | 31 |
| 50        | 195  | 30 | 39 | 2 | 42 | 50        | 201  | 7  | 3  | 3 | 32 |
| <b>17</b> | 195  | 39 | 57 | 2 | 44 | <b>23</b> | 201  | 16 | 27 | 3 | 33 |
| 10        | 195  | 49 | 15 | 2 | 45 | 10        | 201  | 25 | 51 | 3 | 35 |
| 20        | 195  | 58 | 33 | 2 | 47 | 20        | 201  | 35 | 15 | 3 | 36 |
| 30        | 196  | 7  | 51 | 2 | 48 | 30        | 201  | 44 | 40 | 3 | 37 |
| 40        | 196  | 17 | 9  | 2 | 50 | 40        | 201  | 54 | 5  | 3 | 39 |
| 50        | 196  | 26 | 28 | 2 | 51 | 50        | 202  | 3  | 30 | 3 | 40 |
| <b>18</b> | 196  | 35 | 47 | 2 | 52 | <b>24</b> | 202  | 12 | 55 | 3 | 41 |
| Sub.      |      |    |    |   |    | Sub.      |      |    |    |   |    |



# CANON ASCENSIONVM

| P         |      |    |    |   |    |      | m    |    |    |   |      |  |  |
|-----------|------|----|----|---|----|------|------|----|----|---|------|--|--|
|           | tem. | /  | // | / | // |      | tem. | /  | // | / | //   |  |  |
| <b>24</b> | 202  | 12 | 55 | 3 | 41 | O    | 207  | 54 | 20 | 4 | 21   |  |  |
| 10        | 202  | 22 | 20 | 3 | 42 | 10   | 208  | 3  | 53 | 4 | 22   |  |  |
| 20        | 202  | 31 | 46 | 3 | 43 | 20   | 208  | 13 | 27 | 4 | 23   |  |  |
| 30        | 202  | 41 | 12 | 3 | 45 | 30   | 208  | 23 | 1  | 4 | 24   |  |  |
| 40        | 202  | 50 | 38 | 3 | 46 | 40   | 208  | 32 | 35 | 4 | 25   |  |  |
| 50        | 203  | 0  | 4  | 3 | 47 | 50   | 208  | 42 | 9  | 4 | 26   |  |  |
| <b>25</b> | 203  | 9  | 30 | 3 | 48 | I    | 208  | 51 | 43 | 4 | 27   |  |  |
| 10        | 203  | 18 | 57 | 3 | 49 | 10   | 209  | 1  | 18 | 4 | 28   |  |  |
| 20        | 203  | 28 | 24 | 3 | 51 | 20   | 209  | 10 | 53 | 4 | 29   |  |  |
| 30        | 203  | 37 | 51 | 3 | 52 | 30   | 209  | 20 | 28 | 4 | 30   |  |  |
| 40        | 203  | 47 | 18 | 3 | 53 | 40   | 209  | 30 | 3  | 4 | 30   |  |  |
| 50        | 203  | 56 | 45 | 3 | 54 | 50   | 209  | 39 | 39 | 4 | 31   |  |  |
| <b>26</b> | 204  | 6  | 12 | 3 | 55 | 2    | 209  | 49 | 15 | 4 | 32   |  |  |
| 10        | 204  | 15 | 40 | 3 | 56 | 10   | 209  | 58 | 51 | 4 | 33   |  |  |
| 20        | 204  | 25 | 8  | 3 | 57 | 20   | 210  | 8  | 28 | 4 | 34   |  |  |
| 30        | 204  | 34 | 36 | 3 | 59 | 30   | 210  | 18 | 5  | 4 | 34   |  |  |
| 40        | 204  | 44 | 4  | 4 | 0  | 40   | 210  | 27 | 42 | 4 | 35   |  |  |
| 50        | 204  | 53 | 33 | 4 | 1  | 50   | 210  | 37 | 19 | 4 | 36   |  |  |
| <b>27</b> | 205  | 3  | 2  | 4 | 2  | 3    | 210  | 46 | 56 | 4 | 37   |  |  |
| 10        | 205  | 12 | 31 | 4 | 3  | 10   | 210  | 56 | 34 | 4 | 38   |  |  |
| 20        | 205  | 22 | 0  | 4 | 4  | 20   | 211  | 6  | 12 | 4 | 38   |  |  |
| 30        | 205  | 31 | 30 | 4 | 5  | 30   | 211  | 15 | 50 | 4 | 39   |  |  |
| 40        | 205  | 41 | 0  | 4 | 6  | 40   | 211  | 25 | 28 | 4 | 40   |  |  |
| 50        | 205  | 50 | 30 | 4 | 7  | 50   | 211  | 35 | 7  | 4 | 41   |  |  |
| <b>28</b> | 206  | 0  | 0  | 4 | 8  | 4    | 211  | 44 | 46 | 4 | 42   |  |  |
| 10        | 206  | 9  | 30 | 4 | 9  | 10   | 211  | 54 | 25 | 4 | 43   |  |  |
| 20        | 206  | 19 | 1  | 4 | 10 | 20   | 212  | 4  | 4  | 4 | 43   |  |  |
| 30        | 206  | 28 | 32 | 4 | 12 | 30   | 212  | 13 | 43 | 4 | 44   |  |  |
| 40        | 206  | 38 | 3  | 4 | 13 | 40   | 212  | 23 | 23 | 4 | 45   |  |  |
| 50        | 206  | 47 | 34 | 4 | 14 | 50   | 212  | 33 | 4  | 4 | 46   |  |  |
| <b>29</b> | 206  | 57 | 6  | 4 | 15 | 5    | 212  | 42 | 45 | 4 | 47   |  |  |
| 10        | 207  | 6  | 38 | 4 | 16 | 10   | 212  | 52 | 26 | 4 | 47   |  |  |
| 20        | 207  | 16 | 10 | 4 | 17 | 20   | 213  | 2  | 7  | 4 | 48   |  |  |
| 30        | 207  | 25 | 42 | 4 | 18 | 30   | 213  | 11 | 48 | 4 | 49   |  |  |
| 40        | 207  | 35 | 14 | 4 | 19 | 40   | 213  | 21 | 30 | 4 | 50   |  |  |
| 50        | 207  | 44 | 47 | 4 | 20 | 50   | 213  | 31 | 12 | 4 | 50   |  |  |
| <b>30</b> | 207  | 54 | 20 | 4 | 21 | 6    | 213  | 40 | 54 | 4 | 51   |  |  |
|           |      |    |    |   |    | Sub. |      |    |    |   | Sub. |  |  |



| m    |     |    |    |   |    | Dra. |     |    |    |   |    |
|------|-----|----|----|---|----|------|-----|----|----|---|----|
| tem. |     | /  | // | / | // | tem. |     | /  | // | / | // |
| 6    | 213 | 40 | 54 | 4 | 51 | 12   | 219 | 33 | 16 | 5 | 10 |
| 10   | 213 | 50 | 37 | 4 | 52 | 10   | 219 | 43 | 9  | 5 | 10 |
| 20   | 214 | 0  | 20 | 4 | 52 | 20   | 219 | 53 | 2  | 5 | 11 |
| 30   | 214 | 10 | 3  | 4 | 53 | 30   | 220 | 2  | 55 | 5 | 11 |
| 40   | 214 | 19 | 46 | 4 | 54 | 40   | 220 | 12 | 48 | 5 | 11 |
| 50   | 214 | 29 | 29 | 4 | 54 | 50   | 220 | 22 | 41 | 5 | 12 |
| 7    | 214 | 39 | 13 | 4 | 55 | 13   | 220 | 32 | 36 | 5 | 12 |
| 10   | 214 | 48 | 57 | 4 | 56 | 10   | 220 | 42 | 30 | 5 | 12 |
| 20   | 214 | 58 | 41 | 4 | 56 | 20   | 220 | 52 | 25 | 5 | 12 |
| 30   | 215 | 8  | 25 | 4 | 57 | 30   | 221 | 2  | 20 | 5 | 13 |
| 40   | 215 | 18 | 10 | 4 | 58 | 40   | 221 | 12 | 15 | 5 | 13 |
| 50   | 215 | 27 | 55 | 4 | 58 | 50   | 221 | 22 | 10 | 5 | 13 |
| 8    | 215 | 37 | 40 | 4 | 59 | 14   | 221 | 32 | 6  | 5 | 13 |
| 10   | 215 | 47 | 26 | 4 | 59 | 10   | 221 | 42 | 2  | 5 | 14 |
| 20   | 215 | 57 | 12 | 5 | 0  | 20   | 221 | 51 | 58 | 5 | 14 |
| 30   | 216 | 6  | 58 | 5 | 1  | 30   | 222 | 1  | 55 | 5 | 14 |
| 40   | 216 | 16 | 45 | 5 | 1  | 40   | 222 | 11 | 52 | 5 | 14 |
| 50   | 216 | 26 | 32 | 5 | 2  | 50   | 222 | 21 | 50 | 5 | 14 |
| 9    | 216 | 36 | 19 | 5 | 2  | 15   | 222 | 31 | 48 | 5 | 15 |
| 10   | 216 | 46 | 6  | 5 | 3  | 10   | 222 | 41 | 46 | 5 | 15 |
| 20   | 216 | 55 | 54 | 5 | 3  | 20   | 222 | 51 | 44 | 5 | 15 |
| 30   | 217 | 5  | 42 | 5 | 4  | 30   | 223 | 1  | 43 | 5 | 15 |
| 40   | 217 | 15 | 30 | 5 | 4  | 40   | 223 | 11 | 42 | 5 | 15 |
| 50   | 217 | 25 | 18 | 5 | 5  | 50   | 223 | 21 | 42 | 5 | 15 |
| 10   | 217 | 35 | 7  | 5 | 5  | 16   | 223 | 31 | 40 | 5 | 15 |
| 10   | 217 | 44 | 56 | 5 | 6  | 10   | 223 | 41 | 40 | 5 | 15 |
| 20   | 217 | 54 | 46 | 5 | 6  | 20   | 223 | 51 | 40 | 5 | 15 |
| 30   | 218 | 4  | 36 | 5 | 7  | 30   | 224 | 1  | 40 | 5 | 16 |
| 40   | 218 | 14 | 26 | 5 | 7  | 40   | 224 | 11 | 41 | 5 | 16 |
| 50   | 218 | 24 | 16 | 5 | 8  | 50   | 224 | 21 | 42 | 5 | 16 |
| 11   | 218 | 34 | 7  | 5 | 8  | 17   | 224 | 31 | 43 | 5 | 16 |
| 10   | 118 | 43 | 58 | 5 | 8  | 10   | 224 | 41 | 44 | 5 | 16 |
| 20   | 218 | 53 | 49 | 5 | 9  | 20   | 224 | 51 | 46 | 5 | 16 |
| 30   | 219 | 3  | 40 | 5 | 9  | 30   | 225 | 1  | 48 | 5 | 16 |
| 40   | 219 | 13 | 32 | 5 | 9  | 40   | 225 | 11 | 50 | 5 | 15 |
| 50   | 219 | 23 | 24 | 5 | 10 | 50   | 225 | 21 | 53 | 5 | 15 |
| 12   | 219 | 33 | 16 | 5 | 10 | 18   | 225 | 31 | 56 | 5 | 15 |
| Sub  |     |    |    |   |    | Sub. |     |    |    |   |    |



# CANON ASCENSIONVM

|    |  | m    |    |    |   | Differ. |           |  |  | m |      |    |    | Differ. |    |
|----|--|------|----|----|---|---------|-----------|--|--|---|------|----|----|---------|----|
|    |  | tem. | /  | // | / | //      |           |  |  |   | tem. | /  | // | /       | // |
| 18 |  | 225  | 31 | 56 | 5 | 15      | <b>24</b> |  |  |   | 231  | 37 | 8  | 5       | 7  |
| 10 |  | 225  | 41 | 59 | 5 | 15      | 10        |  |  |   | 231  | 47 | 22 | 5       | 7  |
| 20 |  | 225  | 52 | 3  | 5 | 15      | 20        |  |  |   | 231  | 57 | 37 | 5       | 6  |
| 30 |  | 226  | 2  | 7  | 5 | 15      | 30        |  |  |   | 232  | 7  | 52 | 5       | 6  |
| 40 |  | 226  | 12 | 11 | 5 | 15      | 40        |  |  |   | 232  | 18 | 7  | 5       | 5  |
| 50 |  | 226  | 22 | 16 | 5 | 15      | 50        |  |  |   | 232  | 28 | 22 | 5       | 5  |
| 19 |  | 226  | 32 | 21 | 5 | 15      | <b>25</b> |  |  |   | 232  | 38 | 38 | 5       | 4  |
| 10 |  | 226  | 42 | 26 | 5 | 15      | 10        |  |  |   | 232  | 48 | 54 | 5       | 4  |
| 20 |  | 226  | 52 | 32 | 5 | 15      | 20        |  |  |   | 232  | 59 | 10 | 5       | 3  |
| 30 |  | 227  | 2  | 38 | 5 | 14      | 30        |  |  |   | 233  | 9  | 27 | 5       | 3  |
| 40 |  | 227  | 12 | 44 | 5 | 14      | 40        |  |  |   | 233  | 19 | 44 | 5       | 2  |
| 50 |  | 227  | 22 | 50 | 5 | 14      | 50        |  |  |   | 233  | 30 | 1  | 5       | 2  |
| 20 |  | 227  | 32 | 57 | 5 | 14      | <b>26</b> |  |  |   | 233  | 40 | 19 | 5       | 1  |
| 10 |  | 227  | 43 | 4  | 5 | 14      | 10        |  |  |   | 233  | 50 | 37 | 5       | 1  |
| 20 |  | 227  | 53 | 11 | 5 | 13      | 20        |  |  |   | 234  | 0  | 55 | 5       | 0  |
| 30 |  | 228  | 3  | 19 | 5 | 13      | 30        |  |  |   | 234  | 11 | 14 | 5       | 0  |
| 40 |  | 228  | 13 | 27 | 5 | 13      | 40        |  |  |   | 234  | 21 | 33 | 4       | 59 |
| 50 |  | 228  | 23 | 35 | 5 | 13      | 50        |  |  |   | 234  | 31 | 52 | 4       | 59 |
| 21 |  | 228  | 33 | 43 | 5 | 13      | <b>27</b> |  |  |   | 234  | 42 | 11 | 4       | 58 |
| 10 |  | 228  | 43 | 51 | 5 | 13      | 10        |  |  |   | 234  | 52 | 31 | 4       | 58 |
| 20 |  | 228  | 54 | 0  | 5 | 12      | 20        |  |  |   | 235  | 2  | 51 | 4       | 57 |
| 30 |  | 229  | 4  | 9  | 5 | 12      | 30        |  |  |   | 235  | 13 | 11 | 4       | 56 |
| 40 |  | 229  | 14 | 19 | 5 | 12      | 40        |  |  |   | 235  | 23 | 31 | 4       | 56 |
| 50 |  | 229  | 24 | 29 | 5 | 12      | 50        |  |  |   | 235  | 33 | 52 | 4       | 55 |
| 22 |  | 229  | 34 | 40 | 5 | 11      | <b>28</b> |  |  |   | 235  | 44 | 13 | 4       | 54 |
| 10 |  | 229  | 44 | 51 | 5 | 11      | 10        |  |  |   | 235  | 54 | 34 | 4       | 53 |
| 20 |  | 229  | 55 | 2  | 5 | 11      | 20        |  |  |   | 236  | 4  | 56 | 4       | 53 |
| 30 |  | 230  | 5  | 13 | 5 | 11      | 30        |  |  |   | 236  | 15 | 18 | 4       | 52 |
| 40 |  | 230  | 15 | 25 | 5 | 10      | 40        |  |  |   | 236  | 25 | 40 | 4       | 51 |
| 50 |  | 230  | 25 | 37 | 5 | 10      | 50        |  |  |   | 236  | 36 | 2  | 4       | 51 |
| 23 |  | 230  | 35 | 49 | 5 | 10      | <b>29</b> |  |  |   | 236  | 46 | 25 | 4       | 50 |
| 10 |  | 230  | 46 | 1  | 5 | 9       | 10        |  |  |   | 236  | 56 | 48 | 4       | 49 |
| 20 |  | 230  | 56 | 14 | 5 | 9       | 20        |  |  |   | 237  | 7  | 11 | 4       | 48 |
| 30 |  | 231  | 6  | 27 | 5 | 9       | 30        |  |  |   | 237  | 17 | 35 | 4       | 47 |
| 40 |  | 231  | 16 | 40 | 5 | 9       | 40        |  |  |   | 237  | 27 | 59 | 4       | 46 |
| 50 |  | 231  | 26 | 54 | 5 | 8       | 50        |  |  |   | 227  | 38 | 23 | 4       | 46 |
| 24 |  | 231  | 37 | 8  | 5 | 7       | <b>30</b> |  |  |   | 237  | 48 | 48 | 4       | 45 |
|    |  |      |    |    |   | Sub.    |           |  |  |   |      |    |    | Sub.    |    |



| T    |     |    |      |    |    | T    |     |    |      |    |    |
|------|-----|----|------|----|----|------|-----|----|------|----|----|
| tem. |     |    | Dra. |    |    | tem. |     |    | Dra. |    |    |
| /    | //  |    | /    | // |    | /    | //  |    | /    | // |    |
| 0    | 237 | 48 | 48   | 4  | 45 | 6    | 244 | 6  | 34   | 4  | 8  |
| 10   | 237 | 59 | 13   | 4  | 44 | 10   | 244 | 17 | 9    | 4  | 7  |
| 20   | 238 | 9  | 38   | 4  | 43 | 20   | 244 | 27 | 44   | 4  | 6  |
| 30   | 238 | 20 | 3    | 4  | 42 | 30   | 244 | 38 | 19   | 4  | 4  |
| 40   | 238 | 30 | 29   | 4  | 42 | 40   | 244 | 48 | 54   | 4  | 3  |
| 50   | 238 | 40 | 55   | 4  | 41 | 50   | 244 | 59 | 29   | 4  | 2  |
| I    | 238 | 51 | 21   | 4  | 40 | 7    | 245 | 10 | 4    | 4  | 1  |
| 10   | 239 | 1  | 47   | 4  | 39 | 10   | 245 | 21 | 40   | 3  | 59 |
| 20   | 239 | 12 | 14   | 4  | 38 | 20   | 245 | 31 | 16   | 3  | 58 |
| 30   | 239 | 22 | 41   | 4  | 37 | 30   | 245 | 41 | 52   | 3  | 57 |
| 40   | 239 | 33 | 8    | 4  | 36 | 40   | 245 | 52 | 29   | 3  | 56 |
| 50   | 239 | 43 | 36   | 4  | 35 | 50   | 246 | 3  | 6    | 3  | 54 |
| 2    | 239 | 54 | 4    | 4  | 34 | 8    | 246 | 13 | 43   | 3  | 53 |
| 10   | 240 | 4  | 32   | 4  | 33 | 10   | 246 | 24 | 20   | 3  | 51 |
| 20   | 240 | 15 | 0    | 4  | 32 | 20   | 246 | 34 | 58   | 3  | 50 |
| 30   | 240 | 25 | 29   | 4  | 31 | 30   | 246 | 45 | 36   | 3  | 49 |
| 40   | 240 | 35 | 58   | 4  | 30 | 40   | 246 | 56 | 14   | 3  | 48 |
| 50   | 240 | 46 | 27   | 4  | 29 | 50   | 247 | 6  | 52   | 3  | 46 |
| 3    | 240 | 56 | 57   | 4  | 28 | 9    | 247 | 17 | 31   | 3  | 45 |
| 10   | 241 | 7  | 27   | 4  | 27 | 10   | 247 | 28 | 10   | 3  | 44 |
| 20   | 241 | 17 | 57   | 4  | 26 | 20   | 247 | 38 | 49   | 3  | 42 |
| 30   | 241 | 28 | 27   | 4  | 25 | 30   | 247 | 49 | 28   | 3  | 41 |
| 40   | 241 | 38 | 58   | 4  | 24 | 40   | 248 | 0  | 7    | 3  | 40 |
| 50   | 241 | 49 | 29   | 4  | 23 | 50   | 248 | 10 | 47   | 3  | 38 |
| 4    | 242 | 0  | 0    | 4  | 22 | 10   | 248 | 21 | 27   | 3  | 37 |
| 10   | 242 | 10 | 31   | 4  | 21 | 10   | 248 | 32 | 7    | 3  | 35 |
| 20   | 242 | 21 | 3    | 4  | 20 | 20   | 248 | 42 | 47   | 3  | 34 |
| 30   | 242 | 31 | 35   | 4  | 19 | 30   | 248 | 53 | 28   | 3  | 32 |
| 40   | 242 | 42 | 7    | 4  | 17 | 40   | 249 | 4  | 9    | 3  | 31 |
| 50   | 242 | 52 | 39   | 4  | 16 | 50   | 249 | 14 | 50   | 3  | 29 |
| 5    | 243 | 3  | 12   | 4  | 15 | 11   | 249 | 25 | 31   | 3  | 28 |
| 10   | 243 | 13 | 45   | 4  | 14 | 10   | 249 | 36 | 12   | 3  | 26 |
| 20   | 243 | 24 | 18   | 4  | 13 | 20   | 249 | 46 | 54   | 3  | 25 |
| 30   | 243 | 34 | 52   | 4  | 12 | 30   | 249 | 57 | 36   | 3  | 23 |
| 40   | 243 | 45 | 26   | 4  | 10 | 40   | 250 | 8  | 18   | 3  | 22 |
| 50   | 243 | 56 | 0    | 4  | 9  | 50   | 250 | 19 | 0    | 3  | 20 |
| 6    | 244 | 6  | 34   | 4  | 8  | 12   | 250 | 29 | 42   | 3  | 19 |
| Sub. |     |    |      |    |    | Sub. |     |    |      |    |    |



# CANON ASCENSIONVM RECTARVM

| ⌈         |     |    |         |   |    | ⌈         |     |    |         |   |    |
|-----------|-----|----|---------|---|----|-----------|-----|----|---------|---|----|
| tem.      |     |    | Differ. |   |    | tem.      |     |    | Differ. |   |    |
| / //      |     |    | / //    |   |    | / //      |     |    | / //    |   |    |
| <b>12</b> |     |    |         |   |    | <b>18</b> |     |    |         |   |    |
|           | 250 | 29 | 42      | 3 | 19 |           | 256 | 57 | 13      | 2 | 19 |
| 10        | 250 | 40 | 25      | 3 | 17 | 10        | 257 | 8  | 2       | 2 | 17 |
| 20        | 250 | 51 | 8       | 3 | 16 | 20        | 257 | 18 | 51      | 2 | 15 |
| 30        | 251 | 1  | 51      | 3 | 14 | 30        | 257 | 29 | 40      | 2 | 14 |
| 40        | 251 | 12 | 34      | 3 | 13 | 40        | 257 | 40 | 29      | 2 | 12 |
| 50        | 251 | 23 | 17      | 3 | 11 | 50        | 257 | 51 | 18      | 2 | 10 |
| <b>13</b> |     |    |         |   |    | <b>19</b> |     |    |         |   |    |
|           | 251 | 34 | 1       | 3 | 10 |           | 258 | 2  | 8       | 2 | 8  |
| 10        | 251 | 44 | 45      | 3 | 8  | 10        | 258 | 12 | 58      | 2 | 6  |
| 20        | 251 | 55 | 29      | 3 | 7  | 20        | 258 | 23 | 48      | 2 | 4  |
| 30        | 252 | 6  | 13      | 3 | 5  | 30        | 258 | 34 | 38      | 2 | 3  |
| 40        | 252 | 16 | 57      | 3 | 3  | 40        | 258 | 45 | 28      | 2 | 1  |
| 50        | 252 | 27 | 42      | 3 | 2  | 50        | 258 | 56 | 18      | 1 | 59 |
| <b>14</b> |     |    |         |   |    | <b>20</b> |     |    |         |   |    |
|           | 252 | 38 | 27      | 3 | 0  |           | 259 | 7  | 8       | 1 | 57 |
| 10        | 252 | 49 | 12      | 2 | 58 | 10        | 259 | 17 | 58      | 1 | 55 |
| 20        | 252 | 59 | 57      | 2 | 57 | 20        | 259 | 28 | 49      | 1 | 53 |
| 30        | 253 | 10 | 42      | 2 | 55 | 30        | 259 | 39 | 40      | 1 | 52 |
| 40        | 253 | 21 | 27      | 2 | 53 | 40        | 259 | 50 | 31      | 1 | 50 |
| 50        | 253 | 32 | 13      | 2 | 52 | 50        | 260 | 1  | 22      | 1 | 48 |
| <b>15</b> |     |    |         |   |    | <b>21</b> |     |    |         |   |    |
|           | 253 | 42 | 59      | 2 | 50 |           | 260 | 12 | 13      | 1 | 46 |
| 10        | 253 | 53 | 45      | 2 | 48 | 10        | 260 | 23 | 4       | 1 | 44 |
| 20        | 254 | 4  | 31      | 2 | 46 | 20        | 260 | 33 | 55      | 1 | 42 |
| 30        | 254 | 15 | 17      | 2 | 45 | 30        | 260 | 44 | 46      | 1 | 41 |
| 40        | 254 | 26 | 4       | 2 | 43 | 40        | 260 | 55 | 37      | 1 | 39 |
| 50        | 254 | 36 | 51      | 2 | 41 | 50        | 261 | 6  | 29      | 1 | 37 |
| <b>16</b> |     |    |         |   |    | <b>22</b> |     |    |         |   |    |
|           | 254 | 47 | 38      | 2 | 40 |           | 261 | 17 | 21      | 1 | 35 |
| 10        | 254 | 58 | 25      | 2 | 38 | 10        | 261 | 28 | 13      | 1 | 33 |
| 20        | 255 | 9  | 12      | 2 | 36 | 20        | 261 | 39 | 5       | 1 | 31 |
| 30        | 255 | 19 | 59      | 2 | 35 | 30        | 261 | 49 | 57      | 1 | 29 |
| 40        | 255 | 30 | 47      | 2 | 33 | 40        | 262 | 0  | 49      | 1 | 27 |
| 50        | 255 | 41 | 35      | 2 | 31 | 50        | 262 | 11 | 41      | 1 | 25 |
| <b>17</b> |     |    |         |   |    | <b>23</b> |     |    |         |   |    |
|           | 155 | 52 | 23      | 2 | 30 |           | 262 | 22 | 33      | 1 | 23 |
| 10        | 256 | 3  | 11      | 2 | 28 | 10        | 262 | 33 | 25      | 1 | 21 |
| 20        | 256 | 13 | 59      | 2 | 26 | 20        | 262 | 44 | 17      | 1 | 19 |
| 30        | 256 | 24 | 47      | 2 | 25 | 30        | 262 | 55 | 10      | 1 | 17 |
| 40        | 256 | 35 | 35      | 2 | 23 | 40        | 263 | 6  | 3       | 1 | 15 |
| 50        | 256 | 46 | 24      | 2 | 21 | 50        | 263 | 16 | 56      | 1 | 13 |
| <b>18</b> |     |    |         |   |    | <b>24</b> |     |    |         |   |    |
|           | 256 | 57 | 13      | 2 | 19 |           | 263 | 27 | 49      | 1 | 11 |
| Sub.      |     |    |         |   |    | Sub.      |     |    |         |   |    |







CANON ASCENSIONVM

| b     |     |    |    |   | Diffe. |       | b   |    |    |   |    | Diffe. |  |
|-------|-----|----|----|---|--------|-------|-----|----|----|---|----|--------|--|
| tem.  |     | /  | // | / | //     | tem.  |     | /  | // | / | // |        |  |
| 6     | 276 | 32 | 11 | 1 | 11     | 12    | 283 | 2  | 47 | 2 | 19 |        |  |
| 10    | 276 | 43 | 4  | 2 | 13     | 10    | 283 | 13 | 36 | 2 | 21 |        |  |
| 20    | 276 | 53 | 57 | 1 | 15     | 20    | 283 | 24 | 25 | 2 | 23 |        |  |
| 30    | 277 | 4  | 50 | 1 | 17     | 30    | 283 | 35 | 13 | 2 | 25 |        |  |
| 40    | 277 | 15 | 43 | 1 | 19     | 40    | 283 | 46 | 1  | 2 | 26 |        |  |
| 50    | 277 | 26 | 35 | 1 | 21     | 50    | 283 | 56 | 49 | 2 | 28 |        |  |
| 7     | 277 | 37 | 27 | 1 | 23     | 13    | 284 | 7  | 37 | 2 | 30 |        |  |
| 10    | 277 | 48 | 19 | 1 | 25     | 10    | 284 | 18 | 25 | 2 | 31 |        |  |
| 20    | 277 | 59 | 11 | 1 | 27     | 20    | 284 | 29 | 13 | 2 | 33 |        |  |
| 30    | 278 | 10 | 3  | 1 | 29     | 30    | 284 | 40 | 1  | 2 | 35 |        |  |
| 40    | 278 | 20 | 55 | 1 | 31     | 40    | 284 | 50 | 48 | 2 | 36 |        |  |
| 50    | 278 | 31 | 47 | 1 | 33     | 50    | 285 | 1  | 35 | 2 | 38 |        |  |
| 8     | 278 | 42 | 39 | 1 | 35     | 14    | 285 | 12 | 22 | 2 | 40 |        |  |
| 10    | 278 | 53 | 31 | 1 | 37     | 10    | 285 | 23 | 9  | 2 | 41 |        |  |
| 20    | 279 | 4  | 23 | 1 | 39     | 20    | 285 | 33 | 56 | 2 | 43 |        |  |
| 30    | 279 | 15 | 14 | 1 | 41     | 30    | 285 | 44 | 43 | 2 | 45 |        |  |
| 40    | 279 | 26 | 5  | 1 | 42     | 40    | 285 | 55 | 29 | 2 | 46 |        |  |
| 50    | 279 | 36 | 56 | 1 | 44     | 50    | 286 | 6  | 15 | 2 | 48 |        |  |
| 9     | 279 | 47 | 47 | 1 | 46     | 15    | 286 | 17 | 1  | 2 | 50 |        |  |
| 10    | 279 | 58 | 38 | 1 | 48     | 10    | 286 | 27 | 47 | 2 | 52 |        |  |
| 20    | 280 | 9  | 29 | 1 | 50     | 20    | 286 | 38 | 33 | 2 | 53 |        |  |
| 30    | 280 | 20 | 20 | 1 | 52     | 30    | 286 | 49 | 18 | 2 | 55 |        |  |
| 40    | 280 | 31 | 11 | 1 | 53     | 40    | 287 | 0  | 13 | 2 | 57 |        |  |
| 50    | 280 | 42 | 2  | 1 | 55     | 50    | 287 | 10 | 48 | 2 | 58 |        |  |
| 10    | 280 | 52 | 52 | 1 | 57     | 16    | 287 | 21 | 33 | 3 | 0  |        |  |
| 10    | 281 | 3  | 42 | 1 | 59     | 10    | 287 | 32 | 18 | 3 | 2  |        |  |
| 20    | 281 | 14 | 32 | 2 | 1      | 20    | 287 | 43 | 3  | 3 | 3  |        |  |
| 30    | 281 | 25 | 22 | 2 | 3      | 30    | 287 | 53 | 47 | 3 | 5  |        |  |
| 40    | 281 | 36 | 12 | 2 | 4      | 40    | 288 | 4  | 31 | 3 | 7  |        |  |
| 50    | 281 | 47 | 2  | 2 | 6      | 50    | 288 | 15 | 15 | 3 | 8  |        |  |
| 5     | 281 | 57 | 52 | 2 | 8      | 17    | 288 | 25 | 59 | 3 | 10 |        |  |
| 11    | 282 | 8  | 42 | 2 | 10     | 10    | 288 | 36 | 43 | 3 | 11 |        |  |
| 10    | 82  | 19 | 31 | 2 | 12     | 20    | 288 | 47 | 26 | 3 | 13 |        |  |
| 20    | 282 | 30 | 20 | 2 | 14     | 30    | 288 | 58 | 9  | 3 | 14 |        |  |
| 30    | 282 | 41 | 9  | 2 | 15     | 40    | 289 | 8  | 52 | 3 | 16 |        |  |
| 40    | 282 | 51 | 58 | 2 | 17     | 50    | 289 | 19 | 35 | 3 | 17 |        |  |
| 50    | 282 | 47 | 2  | 2 | 19     | 18    | 289 | 30 | 18 | 3 | 19 |        |  |
| 12    | 283 | 2  | 47 | 2 | 19     | 18    | 289 | 30 | 18 | 3 | 19 |        |  |
| Adde. |     |    |    |   |        | Adde. |     |    |    |   |    |        |  |



| b     |     |    |    |    |    | Dra.  |     |    |    |   |    |
|-------|-----|----|----|----|----|-------|-----|----|----|---|----|
| tem.  |     | /  |    | // |    | /     |     | // |    | / |    |
| 18    | 289 | 30 | 18 | 3  | 19 | 24    | 295 | 53 | 26 | 4 | 8  |
| 10    | 289 | 41 | 0  | 3  | 20 | 10    | 296 | 4  | 0  | 4 | 9  |
| 20    | 289 | 51 | 42 | 3  | 22 | 20    | 296 | 14 | 34 | 4 | 10 |
| 30    | 290 | 2  | 24 | 3  | 23 | 30    | 296 | 25 | 8  | 4 | 12 |
| 40    | 290 | 13 | 6  | 3  | 25 | 40    | 296 | 35 | 42 | 4 | 13 |
| 50    | 290 | 23 | 48 | 3  | 26 | 50    | 296 | 46 | 15 | 4 | 14 |
| 19    | 290 | 34 | 29 | 3  | 28 | 25    | 296 | 56 | 48 | 4 | 15 |
| 10    | 290 | 45 | 10 | 3  | 29 | 10    | 297 | 7  | 21 | 4 | 16 |
| 20    | 290 | 55 | 51 | 3  | 31 | 20    | 297 | 17 | 53 | 4 | 17 |
| 30    | 291 | 6  | 32 | 3  | 32 | 30    | 297 | 28 | 25 | 4 | 19 |
| 40    | 291 | 17 | 13 | 3  | 34 | 40    | 297 | 38 | 57 | 4 | 20 |
| 50    | 291 | 27 | 53 | 3  | 35 | 50    | 297 | 49 | 29 | 4 | 21 |
| 20    | 291 | 38 | 33 | 3  | 37 | 26    | 298 | 0  | 0  | 4 | 22 |
| 10    | 291 | 49 | 13 | 3  | 38 | 10    | 298 | 10 | 31 | 4 | 23 |
| 20    | 291 | 59 | 53 | 3  | 40 | 20    | 298 | 21 | 2  | 4 | 24 |
| 30    | 292 | 10 | 32 | 3  | 41 | 30    | 298 | 31 | 33 | 4 | 25 |
| 40    | 292 | 21 | 11 | 3  | 42 | 40    | 298 | 42 | 3  | 4 | 26 |
| 50    | 292 | 31 | 50 | 3  | 44 | 50    | 298 | 52 | 33 | 4 | 27 |
| 21    | 292 | 42 | 29 | 3  | 45 | 27    | 299 | 3  | 3  | 4 | 28 |
| 10    | 292 | 53 | 8  | 3  | 46 | 10    | 299 | 13 | 33 | 4 | 29 |
| 20    | 293 | 3  | 46 | 3  | 48 | 20    | 299 | 24 | 2  | 4 | 30 |
| 30    | 293 | 14 | 24 | 3  | 49 | 30    | 299 | 34 | 31 | 4 | 31 |
| 40    | 293 | 25 | 2  | 3  | 50 | 40    | 299 | 45 | 0  | 4 | 32 |
| 50    | 293 | 35 | 40 | 3  | 51 | 50    | 299 | 55 | 28 | 4 | 33 |
| 22    | 293 | 46 | 17 | 3  | 53 | 28    | 300 | 5  | 56 | 4 | 34 |
| 10    | 293 | 56 | 54 | 3  | 54 | 10    | 300 | 16 | 24 | 4 | 35 |
| 20    | 294 | 7  | 31 | 3  | 56 | 20    | 300 | 26 | 52 | 4 | 36 |
| 30    | 294 | 18 | 8  | 3  | 57 | 30    | 300 | 37 | 19 | 4 | 37 |
| 40    | 294 | 28 | 44 | 3  | 58 | 40    | 300 | 47 | 46 | 4 | 38 |
| 50    | 294 | 39 | 20 | 3  | 59 | 50    | 300 | 58 | 13 | 4 | 39 |
| 23    | 294 | 49 | 56 | 4  | 1  | 29    | 301 | 8  | 39 | 4 | 40 |
| 10    | 295 | 0  | 31 | 4  | 2  | 10    | 301 | 19 | 5  | 4 | 41 |
| 20    | 295 | 11 | 6  | 4  | 3  | 20    | 301 | 29 | 31 | 4 | 42 |
| 30    | 295 | 21 | 41 | 4  | 4  | 30    | 301 | 39 | 57 | 4 | 42 |
| 40    | 295 | 32 | 16 | 4  | 6  | 40    | 301 | 50 | 22 | 4 | 43 |
| 50    | 295 | 42 | 51 | 4  | 7  | 50    | 302 | 0  | 47 | 4 | 44 |
| 24    | 295 | 53 | 26 | 4  | 8  | 30    | 302 | 11 | 12 | 4 | 45 |
| Adde. |     |    |    |    |    | Adde. |     |    |    |   |    |



# CANON ASCENSIONVM

| Diffe. |     |    |    |    |    | Diffe. |     |    |    |    |    |
|--------|-----|----|----|----|----|--------|-----|----|----|----|----|
| rem.   | /   | // | /  | // |    | rem.   | /   | // | /  | // |    |
| 0      | 302 | 11 | 12 | 4  | 45 | 6      | 308 | 22 | 52 | 5  | 7  |
| 10     | 302 | 21 | 37 | 4  | 46 | 10     | 308 | 33 | 6  | 5  | 8  |
| 20     | 302 | 32 | 1  | 4  | 46 | 20     | 308 | 43 | 20 | 5  | 8  |
| 30     | 302 | 42 | 25 | 4  | 47 | 30     | 308 | 53 | 33 | 5  | 9  |
| 40     | 302 | 52 | 49 | 4  | 48 | 40     | 309 | 3  | 46 | 5  | 9  |
| 50     | 303 | 3  | 12 | 4  | 49 | 50     | 309 | 13 | 59 | 5  | 9  |
| 1      | 303 | 13 | 35 | 4  | 50 | 7      | 309 | 24 | 11 | 5  | 10 |
| 10     | 303 | 23 | 58 | 4  | 51 | 10     | 309 | 34 | 23 | 5  | 10 |
| 20     | 303 | 34 | 20 | 4  | 51 | 20     | 309 | 44 | 35 | 5  | 10 |
| 30     | 303 | 44 | 42 | 4  | 52 | 30     | 309 | 54 | 47 | 5  | 11 |
| 40     | 303 | 55 | 4  | 4  | 53 | 40     | 310 | 4  | 58 | 5  | 11 |
| 50     | 304 | 5  | 26 | 4  | 53 | 50     | 310 | 15 | 9  | 5  | 11 |
| 2      | 304 | 15 | 47 | 4  | 54 | 8      | 310 | 25 | 20 | 5  | 11 |
| 10     | 304 | 26 | 8  | 4  | 55 | 10     | 310 | 35 | 31 | 5  | 12 |
| 20     | 304 | 36 | 29 | 4  | 56 | 20     | 310 | 45 | 41 | 5  | 12 |
| 30     | 304 | 46 | 49 | 4  | 57 | 30     | 310 | 55 | 51 | 5  | 12 |
| 40     | 304 | 57 | 9  | 4  | 57 | 40     | 311 | 6  | 0  | 5  | 12 |
| 50     | 305 | 7  | 29 | 4  | 58 | 50     | 311 | 16 | 9  | 5  | 12 |
| 3      | 305 | 17 | 49 | 4  | 58 | 9      | 311 | 26 | 17 | 5  | 13 |
| 10     | 305 | 28 | 8  | 4  | 59 | 10     | 311 | 36 | 25 | 5  | 13 |
| 20     | 305 | 38 | 27 | 4  | 59 | 20     | 311 | 46 | 33 | 5  | 13 |
| 30     | 305 | 48 | 46 | 5  | 0  | 30     | 311 | 56 | 41 | 5  | 13 |
| 40     | 305 | 59 | 5  | 5  | 0  | 40     | 312 | 6  | 49 | 5  | 14 |
| 50     | 306 | 9  | 23 | 5  | 1  | 50     | 312 | 16 | 56 | 5  | 14 |
| 4      | 306 | 19 | 41 | 5  | 1  | 10     | 312 | 27 | 3  | 5  | 14 |
| 10     | 306 | 29 | 59 | 5  | 2  | 10     | 312 | 37 | 10 | 5  | 14 |
| 20     | 306 | 40 | 16 | 5  | 2  | 20     | 312 | 47 | 16 | 5  | 14 |
| 30     | 306 | 50 | 33 | 5  | 3  | 30     | 312 | 57 | 22 | 5  | 14 |
| 40     | 307 | 0  | 50 | 5  | 3  | 40     | 313 | 7  | 28 | 5  | 15 |
| 50     | 307 | 11 | 6  | 5  | 4  | 50     | 313 | 17 | 34 | 5  | 15 |
| 5      | 307 | 21 | 22 | 5  | 4  | 11     | 313 | 27 | 39 | 5  | 15 |
| 10     | 307 | 31 | 38 | 5  | 5  | 10     | 313 | 37 | 44 | 5  | 15 |
| 20     | 307 | 41 | 53 | 5  | 5  | 20     | 313 | 47 | 49 | 5  | 15 |
| 30     | 307 | 52 | 8  | 5  | 6  | 30     | 313 | 57 | 53 | 5  | 15 |
| 40     | 308 | 2  | 23 | 5  | 6  | 40     | 314 | 7  | 56 | 5  | 15 |
| 50     | 308 | 12 | 38 | 5  | 7  | 50     | 314 | 18 | 1  | 5  | 15 |
| 6      | 308 | 22 | 52 | 5  | 7  | 12     | 314 | 28 | 4  | 5  | 15 |
| Adde.  |     |    |    |    |    | Adde.  |     |    |    |    |    |



| Dra.      |     |    |    |    |    | Dra.      |     |    |    |    |    |
|-----------|-----|----|----|----|----|-----------|-----|----|----|----|----|
| rem.      | /   | // | /  | // |    | rem.      | /   | // | /  | // |    |
| <b>12</b> | 314 | 28 | 4  | 5  | 15 | <b>18</b> | 320 | 26 | 44 | 5  | 10 |
| 10        | 314 | 38 | 7  | 5  | 15 | 10        | 320 | 36 | 36 | 5  | 10 |
| 20        | 314 | 48 | 10 | 5  | 15 | 20        | 320 | 46 | 28 | 5  | 9  |
| 30        | 314 | 58 | 12 | 5  | 16 | 30        | 320 | 56 | 20 | 5  | 9  |
| 40        | 315 | 8  | 14 | 5  | 16 | 40        | 321 | 6  | 11 | 5  | 9  |
| 50        | 315 | 18 | 16 | 5  | 16 | 50        | 321 | 16 | 2  | 5  | 8  |
| <b>13</b> | 315 | 28 | 17 | 5  | 16 | <b>19</b> | 321 | 25 | 53 | 5  | 8  |
| 10        | 315 | 38 | 18 | 5  | 16 | 10        | 321 | 35 | 44 | 5  | 8  |
| 20        | 315 | 48 | 19 | 5  | 16 | 20        | 321 | 45 | 34 | 5  | 7  |
| 30        | 315 | 58 | 20 | 5  | 16 | 30        | 321 | 55 | 24 | 5  | 7  |
| 40        | 316 | 8  | 20 | 5  | 15 | 40        | 322 | 5  | 14 | 5  | 6  |
| 50        | 316 | 18 | 20 | 5  | 15 | 50        | 322 | 15 | 4  | 5  | 6  |
| <b>14</b> | 316 | 28 | 20 | 5  | 15 | <b>20</b> | 322 | 24 | 53 | 5  | 5  |
| 10        | 316 | 38 | 19 | 5  | 15 | 10        | 322 | 34 | 42 | 5  | 5  |
| 20        | 316 | 48 | 18 | 5  | 15 | 20        | 322 | 44 | 30 | 5  | 4  |
| 30        | 316 | 58 | 17 | 5  | 15 | 30        | 322 | 54 | 18 | 5  | 4  |
| 40        | 317 | 8  | 16 | 5  | 15 | 40        | 323 | 4  | 6  | 5  | 3  |
| 50        | 317 | 18 | 14 | 5  | 15 | 50        | 323 | 13 | 54 | 5  | 3  |
| <b>15</b> | 317 | 28 | 12 | 5  | 15 | <b>21</b> | 323 | 23 | 41 | 5  | 2  |
| 10        | 317 | 38 | 10 | 5  | 14 | 10        | 323 | 33 | 18 | 5  | 2  |
| 20        | 317 | 48 | 8  | 5  | 14 | 20        | 323 | 43 | 15 | 5  | 1  |
| 30        | 317 | 58 | 5  | 5  | 14 | 30        | 323 | 53 | 2  | 5  | 1  |
| 40        | 318 | 8  | 2  | 5  | 14 | 40        | 324 | 2  | 48 | 5  | 0  |
| 50        | 318 | 17 | 58 | 5  | 14 | 50        | 324 | 12 | 34 | 4  | 59 |
| <b>16</b> | 318 | 27 | 54 | 5  | 13 | <b>22</b> | 324 | 22 | 20 | 4  | 59 |
| 10        | 318 | 37 | 50 | 5  | 13 | 10        | 324 | 32 | 5  | 4  | 58 |
| 20        | 318 | 47 | 45 | 5  | 13 | 20        | 324 | 41 | 50 | 4  | 58 |
| 30        | 318 | 57 | 40 | 5  | 13 | 30        | 324 | 51 | 35 | 4  | 57 |
| 40        | 319 | 7  | 35 | 5  | 12 | 40        | 325 | 1  | 19 | 4  | 56 |
| 50        | 319 | 17 | 20 | 5  | 12 | 50        | 325 | 11 | 3  | 4  | 56 |
| <b>17</b> | 319 | 27 | 24 | 5  | 12 | <b>23</b> | 325 | 20 | 47 | 4  | 55 |
| 10        | 319 | 37 | 18 | 5  | 12 | 10        | 325 | 30 | 31 | 4  | 54 |
| 20        | 319 | 47 | 12 | 5  | 11 | 20        | 325 | 40 | 14 | 4  | 54 |
| 30        | 319 | 57 | 5  | 5  | 11 | 30        | 325 | 49 | 57 | 4  | 53 |
| 40        | 320 | 6  | 58 | 5  | 11 | 40        | 325 | 59 | 40 | 4  | 52 |
| 50        | 320 | 16 | 51 | 5  | 10 | 50        | 326 | 9  | 23 | 4  | 52 |
| <b>18</b> | 320 | 26 | 44 | 5  | 10 | <b>24</b> | 326 | 19 | 6  | 4  | 51 |
| Adde.     |     |    |    |    |    | Adde.     |     |    |    |    |    |



# CANON ASCENSIONVM

| ☿         |      |    |    | Differ. |    | ♂        |      |    |    | Differ. |    |
|-----------|------|----|----|---------|----|----------|------|----|----|---------|----|
|           | tem. | /  | // | /       | // |          | tem. | /  | // | /       | // |
| <b>24</b> | 326  | 19 | 6  | 4       | 51 | <b>0</b> | 332  | 5  | 40 | 4       | 21 |
| 10        | 326  | 28 | 48 | 4       | 50 | 10       | 332  | 15 | 13 | 4       | 20 |
| 20        | 326  | 38 | 30 | 4       | 50 | 20       | 332  | 24 | 46 | 4       | 19 |
| 30        | 326  | 48 | 12 | 4       | 49 | 30       | 332  | 34 | 18 | 4       | 18 |
| 40        | 326  | 57 | 53 | 4       | 48 | 40       | 332  | 43 | 50 | 4       | 17 |
| 50        | 327  | 7  | 34 | 4       | 47 | 50       | 332  | 53 | 22 | 4       | 16 |
| <b>25</b> | 327  | 17 | 15 | 4       | 47 | <b>1</b> | 333  | 2  | 54 | 4       | 15 |
| 10        | 327  | 26 | 56 | 4       | 46 | 10       | 333  | 12 | 26 | 4       | 14 |
| 20        | 327  | 36 | 37 | 4       | 45 | 20       | 333  | 21 | 57 | 4       | 13 |
| 30        | 327  | 46 | 17 | 4       | 45 | 30       | 333  | 31 | 28 | 4       | 12 |
| 40        | 327  | 55 | 56 | 4       | 44 | 40       | 333  | 40 | 59 | 4       | 10 |
| 50        | 328  | 5  | 36 | 4       | 43 | 50       | 333  | 50 | 30 | 4       | 9  |
| <b>26</b> | 328  | 15 | 14 | 4       | 42 | <b>2</b> | 334  | 0  | 0  | 4       | 8  |
| 10        | 328  | 24 | 53 | 4       | 41 | 10       | 334  | 9  | 30 | 4       | 7  |
| 20        | 328  | 34 | 32 | 4       | 41 | 20       | 334  | 19 | 0  | 4       | 6  |
| 30        | 328  | 44 | 10 | 4       | 40 | 30       | 334  | 28 | 30 | 4       | 5  |
| 40        | 328  | 53 | 48 | 4       | 39 | 40       | 334  | 38 | 0  | 4       | 4  |
| 50        | 329  | 3  | 26 | 4       | 38 | 50       | 334  | 47 | 29 | 4       | 3  |
| <b>27</b> | 329  | 13 | 4  | 4       | 37 | <b>3</b> | 334  | 56 | 58 | 4       | 2  |
| 10        | 329  | 22 | 41 | 3       | 36 | 10       | 335  | 6  | 27 | 4       | 1  |
| 20        | 329  | 32 | 18 | 4       | 35 | 20       | 335  | 15 | 56 | 4       | 0  |
| 30        | 329  | 41 | 55 | 4       | 35 | 30       | 335  | 25 | 24 | 3       | 59 |
| 40        | 329  | 51 | 32 | 4       | 34 | 40       | 335  | 34 | 52 | 3       | 57 |
| 50        | 330  | 1  | 9  | 4       | 33 | 50       | 335  | 44 | 20 | 3       | 56 |
| <b>28</b> | 330  | 10 | 45 | 4       | 32 | <b>4</b> | 335  | 53 | 48 | 3       | 55 |
| 10        | 330  | 20 | 21 | 4       | 31 | 10       | 336  | 3  | 15 | 3       | 54 |
| 20        | 330  | 29 | 57 | 4       | 30 | 20       | 336  | 12 | 42 | 3       | 53 |
| 30        | 330  | 39 | 32 | 4       | 29 | 30       | 336  | 22 | 9  | 3       | 52 |
| 40        | 330  | 49 | 7  | 4       | 29 | 40       | 336  | 31 | 36 | 3       | 51 |
| 50        | 330  | 58 | 42 | 4       | 28 | 50       | 336  | 41 | 3  | 3       | 49 |
| <b>29</b> | 331  | 8  | 17 | 4       | 27 | <b>5</b> | 336  | 50 | 30 | 3       | 48 |
| 10        | 331  | 17 | 51 | 4       | 26 | 10       | 336  | 59 | 56 | 4       | 47 |
| 20        | 331  | 27 | 25 | 4       | 25 | 20       | 337  | 9  | 22 | 3       | 46 |
| 30        | 331  | 36 | 59 | 4       | 24 | 30       | 337  | 18 | 48 | 3       | 45 |
| 40        | 331  | 46 | 33 | 4       | 23 | 40       | 337  | 28 | 14 | 3       | 43 |
| 50        | 331  | 56 | 7  | 4       | 22 | 50       | 337  | 37 | 40 | 3       | 42 |
| <b>30</b> | 332  | 5  | 40 | 4       | 21 | <b>6</b> | 337  | 47 | 5  | 3       | 41 |
| Adde      |      |    |    |         |    | Adde     |      |    |    |         |    |



| X    |     |    |    |   |    | Differ. |     |    |    |   |    | X    |     |    |    |   |    | Differ. |     |    |    |   |    |
|------|-----|----|----|---|----|---------|-----|----|----|---|----|------|-----|----|----|---|----|---------|-----|----|----|---|----|
| tem. |     | /  | // |   |    | /       | //  |    |    |   |    | tem. |     | /  | // |   |    | /       | //  |    |    |   |    |
| 6    | 337 | 47 | 5  | 3 | 41 | 12      | 343 | 24 | 13 | 2 | 52 | 10   | 337 | 56 | 30 | 3 | 40 | 10      | 343 | 33 | 32 | 2 | 51 |
| 20   | 338 | 5  | 55 | 3 | 39 | 20      | 343 | 42 | 51 | 2 | 50 | 30   | 338 | 15 | 20 | 3 | 37 | 30      | 343 | 52 | 9  | 2 | 48 |
| 40   | 338 | 24 | 45 | 3 | 36 | 40      | 344 | 1  | 27 | 2 | 47 | 50   | 338 | 34 | 9  | 3 | 35 | 50      | 344 | 10 | 45 | 2 | 45 |
| 7    | 338 | 43 | 33 | 3 | 33 | 13      | 344 | 20 | 3  | 2 | 44 | 10   | 338 | 52 | 57 | 3 | 32 | 10      | 344 | 29 | 21 | 2 | 42 |
| 20   | 339 | 2  | 21 | 3 | 31 | 20      | 344 | 38 | 39 | 2 | 41 | 30   | 339 | 11 | 44 | 3 | 29 | 30      | 344 | 47 | 57 | 2 | 39 |
| 40   | 339 | 21 | 7  | 3 | 28 | 40      | 344 | 57 | 14 | 2 | 38 | 50   | 339 | 30 | 30 | 3 | 27 | 50      | 345 | 6  | 31 | 2 | 36 |
| 8    | 339 | 39 | 53 | 3 | 25 | 14      | 345 | 15 | 48 | 2 | 35 | 10   | 339 | 49 | 16 | 3 | 24 | 10      | 345 | 25 | 5  | 2 | 33 |
| 20   | 339 | 58 | 39 | 3 | 23 | 20      | 345 | 34 | 22 | 2 | 32 | 30   | 340 | 8  | 1  | 3 | 21 | 30      | 345 | 43 | 39 | 2 | 30 |
| 40   | 340 | 17 | 23 | 3 | 20 | 40      | 345 | 52 | 56 | 2 | 29 | 50   | 340 | 26 | 45 | 3 | 19 | 50      | 346 | 2  | 12 | 2 | 27 |
| 9    | 340 | 36 | 7  | 3 | 17 | 15      | 346 | 11 | 28 | 2 | 26 | 10   | 340 | 45 | 29 | 3 | 16 | 10      | 346 | 20 | 44 | 2 | 24 |
| 20   | 340 | 54 | 51 | 3 | 15 | 20      | 346 | 30 | 0  | 2 | 23 | 30   | 341 | 4  | 12 | 3 | 13 | 30      | 346 | 39 | 16 | 2 | 21 |
| 40   | 341 | 13 | 33 | 3 | 12 | 40      | 346 | 48 | 32 | 2 | 20 | 50   | 341 | 22 | 54 | 3 | 11 | 50      | 346 | 57 | 48 | 2 | 18 |
| 10   | 341 | 32 | 15 | 3 | 9  | 16      | 347 | 7  | 3  | 2 | 17 | 10   | 341 | 41 | 36 | 3 | 8  | 10      | 347 | 16 | 19 | 2 | 15 |
| 20   | 341 | 50 | 57 | 3 | 6  | 20      | 347 | 25 | 34 | 2 | 14 | 30   | 342 | 0  | 17 | 3 | 5  | 30      | 347 | 34 | 49 | 2 | 12 |
| 40   | 342 | 9  | 37 | 3 | 4  | 40      | 347 | 44 | 4  | 2 | 11 | 50   | 342 | 18 | 57 | 3 | 2  | 50      | 347 | 53 | 19 | 2 | 9  |
| 11   | 342 | 28 | 17 | 3 | 1  | 17      | 348 | 2  | 34 | 2 | 8  | 10   | 342 | 37 | 37 | 2 | 59 | 10      | 348 | 11 | 49 | 2 | 6  |
| 20   | 342 | 46 | 57 | 2 | 58 | 20      | 348 | 21 | 4  | 2 | 5  | 30   | 342 | 56 | 16 | 2 | 56 | 30      | 348 | 30 | 19 | 2 | 3  |
| 40   | 343 | 5  | 35 | 2 | 55 | 40      | 348 | 39 | 34 | 2 | 1  | 50   | 343 | 14 | 54 | 2 | 54 | 50      | 348 | 48 | 48 | 1 | 59 |
| 12   | 343 | 24 | 13 | 2 | 52 | 18      | 348 | 58 | 2  | 1 | 58 |      |     |    |    |   |    |         |     |    |    |   |    |
|      |     |    |    |   |    | Adde.   |     |    |    |   |    |      |     |    |    |   |    | Adde.   |     |    |    |   |    |



# CANON ASCENSIONVM

| K    |     |    |    |   |    | Differ. |     | K    |    |   |    |   |    | Differ. |  |
|------|-----|----|----|---|----|---------|-----|------|----|---|----|---|----|---------|--|
| tem. |     | /  | // | / | // |         |     | tem. |    | / | // | / | // |         |  |
| 18   | 348 | 58 | 2  | 1 | 58 | 24      | 354 | 29   | 35 | 1 | 0  |   |    |         |  |
| 10   | 349 | 7  | 16 | 1 | 56 | 10      | 354 | 38   | 47 | 0 | 59 |   |    |         |  |
| 20   | 349 | 16 | 30 | 1 | 55 | 20      | 354 | 47   | 58 | 0 | 57 |   |    |         |  |
| 30   | 349 | 25 | 44 | 1 | 53 | 30      | 354 | 57   | 9  | 0 | 55 |   |    |         |  |
| 40   | 349 | 34 | 58 | 1 | 52 | 40      | 355 | 6    | 20 | 0 | 54 |   |    |         |  |
| 50   | 349 | 44 | 12 | 1 | 50 | 50      | 355 | 15   | 31 | 0 | 52 |   |    |         |  |
| 19   | 349 | 53 | 25 | 1 | 49 | 25      | 355 | 24   | 42 | 0 | 50 |   |    |         |  |
| 10   | 350 | 2  | 39 | 1 | 47 | 10      | 355 | 33   | 53 | 0 | 49 |   |    |         |  |
| 20   | 350 | 11 | 52 | 1 | 46 | 20      | 355 | 43   | 4  | 0 | 47 |   |    |         |  |
| 30   | 350 | 21 | 5  | 1 | 44 | 30      | 355 | 52   | 15 | 0 | 45 |   |    |         |  |
| 40   | 350 | 30 | 19 | 1 | 43 | 40      | 356 | 1    | 26 | 0 | 44 |   |    |         |  |
| 50   | 350 | 39 | 32 | 1 | 41 | 50      | 356 | 10   | 36 | 0 | 42 |   |    |         |  |
| 20   | 350 | 48 | 45 | 1 | 40 | 26      | 356 | 19   | 47 | 0 | 40 |   |    |         |  |
| 10   | 350 | 57 | 48 | 1 | 38 | 10      | 356 | 28   | 58 | 0 | 39 |   |    |         |  |
| 20   | 351 | 7  | 10 | 1 | 37 | 20      | 356 | 38   | 9  | 0 | 37 |   |    |         |  |
| 30   | 351 | 16 | 23 | 1 | 35 | 30      | 356 | 47   | 20 | 0 | 35 |   |    |         |  |
| 40   | 351 | 25 | 36 | 1 | 33 | 40      | 356 | 56   | 31 | 0 | 34 |   |    |         |  |
| 50   | 351 | 34 | 48 | 1 | 32 | 50      | 357 | 5    | 42 | 0 | 32 |   |    |         |  |
| 21   | 351 | 44 | 1  | 1 | 30 | 27      | 357 | 14   | 52 | 0 | 30 |   |    |         |  |
| 10   | 351 | 53 | 14 | 1 | 29 | 10      | 357 | 24   | 3  | 0 | 29 |   |    |         |  |
| 20   | 352 | 2  | 26 | 1 | 27 | 20      | 357 | 33   | 13 | 0 | 27 |   |    |         |  |
| 30   | 352 | 11 | 38 | 1 | 25 | 30      | 357 | 42   | 24 | 0 | 25 |   |    |         |  |
| 40   | 352 | 20 | 51 | 1 | 24 | 40      | 357 | 51   | 34 | 0 | 24 |   |    |         |  |
| 50   | 352 | 30 | 3  | 1 | 22 | 50      | 358 | 0    | 45 | 0 | 22 |   |    |         |  |
| 22   | 352 | 39 | 15 | 1 | 20 | 28      | 358 | 9    | 55 | 0 | 20 |   |    |         |  |
| 10   | 352 | 48 | 27 | 1 | 19 | 10      | 358 | 19   | 6  | 0 | 19 |   |    |         |  |
| 20   | 352 | 57 | 39 | 1 | 17 | 20      | 358 | 28   | 17 | 0 | 17 |   |    |         |  |
| 30   | 353 | 6  | 51 | 1 | 15 | 30      | 358 | 37   | 27 | 0 | 15 |   |    |         |  |
| 40   | 353 | 16 | 2  | 1 | 14 | 40      | 358 | 46   | 38 | 0 | 14 |   |    |         |  |
| 50   | 353 | 25 | 14 | 1 | 12 | 50      | 358 | 55   | 48 | 0 | 12 |   |    |         |  |
| 23   | 353 | 34 | 26 | 1 | 10 | 29      | 359 | 4    | 58 | 0 | 10 |   |    |         |  |
| 10   | 353 | 43 | 38 | 1 | 9  | 10      | 359 | 14   | 9  | 0 | 9  |   |    |         |  |
| 20   | 353 | 52 | 49 | 1 | 7  | 20      | 359 | 23   | 19 | 0 | 7  |   |    |         |  |
| 30   | 354 | 2  | 11 | 1 | 5  | 30      | 359 | 32   | 29 | 0 | 5  |   |    |         |  |
| 40   | 354 | 11 | 12 | 1 | 4  | 40      | 359 | 41   | 40 | 0 | 4  |   |    |         |  |
| 50   | 354 | 20 | 24 | 1 | 2  | 50      | 359 | 50   | 50 | 0 | 2  |   |    |         |  |
| 24   | 354 | 29 | 35 | 1 | 0  | 30      | 360 | 0    | 0  | 0 | 0  |   |    |         |  |
|      |     |    |    |   |    | Adde    |     |      |    |   |    |   |    | Adde    |  |



MYNSTER 1571

Imprimatur

# CANON DIFFE

RENTIARVM ASCEN

sionakum usq; ad quadrantem.



# CANON DIFFERENTIARVM

Gradus declinationis uel

Gradus declinationis uel exaltationis Poli.

|    | I    |    |    | 2    |    |    | 3    |    |    | 4    |    |    | 5    |    |    | 6    |    |    |
|----|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|
|    | tem= | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // |
|    | pore |    |    |      |    |    |      |    |    |      |    |    |      |    |    |      |    |    |
| 1  | 0    | 1  | 3  | 0    | 2  | 6  | 0    | 3  | 9  | 0    | 4  | 12 | 0    | 5  | 15 | 0    | 6  | 19 |
| 2  | 0    | 2  | 6  | 0    | 4  | 11 | 0    | 6  | 17 | 0    | 8  | 24 | 0    | 10 | 30 | 0    | 12 | 37 |
| 3  | 0    | 3  | 9  | 0    | 6  | 17 | 0    | 9  | 27 | 0    | 12 | 36 | 0    | 15 | 46 | 0    | 18 | 56 |
| 4  | 0    | 4  | 12 | 0    | 8  | 24 | 0    | 12 | 36 | 0    | 16 | 49 | 0    | 21 | 2  | 0    | 25 | 16 |
| 5  | 0    | 5  | 15 | 0    | 10 | 30 | 0    | 15 | 46 | 0    | 21 | 2  | 0    | 26 | 19 | 0    | 31 | 37 |
| 6  | 0    | 6  | 19 | 0    | 12 | 37 | 0    | 18 | 56 | 0    | 25 | 16 | 0    | 31 | 37 | 0    | 37 | 59 |
| 7  | 0    | 7  | 22 | 0    | 14 | 45 | 0    | 22 | 7  | 0    | 29 | 31 | 0    | 36 | 56 | 0    | 44 | 22 |
| 8  | 0    | 8  | 26 | 0    | 16 | 52 | 0    | 25 | 19 | 0    | 33 | 47 | 0    | 42 | 16 | 0    | 50 | 47 |
| 9  | 0    | 9  | 30 | 0    | 19 | 1  | 0    | 28 | 32 | 0    | 38 | 4  | 0    | 47 | 38 | 0    | 57 | 14 |
| 10 | 0    | 10 | 35 | 0    | 21 | 10 | 4    | 31 | 46 | 0    | 42 | 23 | 0    | 53 | 2  | 1    | 3  | 43 |
| 11 | 0    | 11 | 39 | 0    | 23 | 20 | 0    | 35 | 1  | 0    | 46 | 44 | 0    | 58 | 28 | 1    | 10 | 14 |
| 12 | 0    | 12 | 45 | 0    | 25 | 31 | 0    | 38 | 18 | 0    | 51 | 9  | 1    | 3  | 56 | 1    | 16 | 48 |
| 13 | 0    | 13 | 51 | 0    | 27 | 43 | 0    | 41 | 36 | 0    | 55 | 30 | 1    | 9  | 26 | 1    | 23 | 26 |
| 14 | 0    | 14 | 58 | 0    | 29 | 56 | 0    | 44 | 55 | 0    | 59 | 57 | 1    | 15 | 1  | 1    | 30 | 6  |
| 15 | 0    | 16 | 5  | 0    | 32 | 10 | 0    | 48 | 17 | 1    | 4  | 25 | 1    | 20 | 36 | 1    | 36 | 50 |
| 16 | 0    | 17 | 13 | 0    | 34 | 25 | 0    | 51 | 40 | 1    | 8  | 56 | 2    | 26 | 15 | 1    | 43 | 37 |
| 17 | 0    | 18 | 21 | 0    | 36 | 42 | 0    | 55 | 5  | 1    | 13 | 30 | 1    | 31 | 58 | 1    | 50 | 31 |
| 18 | 0    | 19 | 30 | 0    | 39 | 0  | 0    | 58 | 32 | 1    | 18 | 7  | 1    | 37 | 44 | 1    | 57 | 24 |
| 19 | 0    | 20 | 40 | 0    | 41 | 20 | 1    | 2  | 2  | 1    | 22 | 47 | 1    | 43 | 35 | 2    | 4  | 47 |
| 20 | 0    | 21 | 51 | 0    | 43 | 42 | 1    | 5  | 35 | 1    | 27 | 30 | 1    | 49 | 29 | 3    | 11 | 33 |
| 21 | 0    | 23 | 2  | 0    | 46 | 5  | 1    | 9  | 10 | 1    | 32 | 17 | 1    | 55 | 28 | 2    | 18 | 45 |
| 22 | 0    | 24 | 15 | 0    | 48 | 30 | 1    | 12 | 48 | 1    | 37 | 8  | 2    | 1  | 33 | 1    | 26 | 2  |
| 23 | 0    | 25 | 28 | 0    | 50 | 57 | 1    | 16 | 29 | 1    | 42 | 3  | 2    | 7  | 42 | 2    | 33 | 26 |
| 24 | 0    | 26 | 43 | 0    | 53 | 27 | 1    | 20 | 13 | 1    | 47 | 3  | 2    | 13 | 57 | 2    | 40 | 56 |
| 25 | 0    | 27 | 59 | 0    | 55 | 59 | 1    | 24 | 1  | 1    | 52 | 6  | 2    | 20 | 17 | 2    | 48 | 33 |
| 26 | 0    | 29 | 16 | 0    | 58 | 23 | 1    | 27 | 53 | 1    | 57 | 16 | 2    | 26 | 44 | 2    | 56 | 18 |
| 27 | 0    | 30 | 35 | 1    | 1  | 10 | 1    | 31 | 48 | 2    | 2  | 31 | 2    | 33 | 18 | 3    | 4  | 12 |
| 28 | 0    | 31 | 55 | 1    | 3  | 50 | 1    | 35 | 48 | 2    | 7  | 51 | 2    | 39 | 59 | 3    | 12 | 13 |
| 29 | 0    | 33 | 16 | 1    | 6  | 33 | 1    | 39 | 53 | 2    | 13 | 17 | 2    | 46 | 47 | 3    | 20 | 24 |
| 30 | 0    | 34 | 39 | 1    | 9  | 19 | 1    | 44 | 2  | 2    | 18 | 50 | 2    | 53 | 43 | 3    | 28 | 44 |



exaltationis poli.

|    | 1    |    |    | 2    |    |    | 3    |    |    | 4    |    |    | 5    |    |    | 6    |    |    |
|----|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|
|    | tem. | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // |
| 30 | 0    | 34 | 39 | 1    | 9  | 19 | 1    | 44 | 2  | 2    | 18 | 50 | 2    | 53 | 43 | 3    | 28 | 44 |
| 31 | 0    | 36 | 4  | 1    | 12 | 8  | 1    | 48 | 16 | 2    | 24 | 28 | 3    | 0  | 48 | 3    | 37 | 15 |
| 32 | 0    | 37 | 30 | 1    | 15 | 1  | 1    | 52 | 36 | 2    | 30 | 16 | 3    | 8  | 2  | 3    | 45 | 57 |
| 33 | 0    | 38 | 58 | 1    | 17 | 58 | 1    | 57 | 1  | 2    | 36 | 10 | 3    | 15 | 29 | 3    | 54 | 50 |
| 34 | 0    | 40 | 29 | 1    | 20 | 59 | 2    | 1  | 33 | 2    | 42 | 12 | 3    | 22 | 59 | 4    | 3  | 55 |
| 35 | 0    | 42 | 1  | 1    | 24 | 4  | 2    | 6  | 11 | 2    | 48 | 23 | 3    | 30 | 44 | 4    | 13 | 14 |
| 36 | 0    | 43 | 36 | 1    | 27 | 14 | 2    | 10 | 56 | 2    | 54 | 44 | 3    | 38 | 40 | 4    | 22 | 47 |
| 37 | 0    | 45 | 13 | 1    | 30 | 28 | 2    | 15 | 48 | 3    | 1  | 14 | 3    | 46 | 48 | 4    | 32 | 34 |
| 38 | 0    | 46 | 52 | 1    | 33 | 48 | 2    | 20 | 48 | 3    | 7  | 54 | 3    | 55 | 10 | 4    | 42 | 37 |
| 39 | 0    | 48 | 35 | 1    | 37 | 14 | 2    | 25 | 56 | 3    | 14 | 46 | 4    | 3  | 46 | 4    | 52 | 57 |
| 40 | 0    | 50 | 21 | 1    | 40 | 45 | 2    | 31 | 14 | 3    | 21 | 50 | 4    | 12 | 36 | 5    | 3  | 35 |
| 41 | 0    | 52 | 10 | 1    | 44 | 22 | 2    | 36 | 40 | 3    | 29 | 4  | 4    | 21 | 42 | 5    | 14 | 32 |
| 42 | 0    | 54 | 2  | 1    | 48 | 7  | 2    | 42 | 16 | 3    | 36 | 38 | 4    | 31 | 5  | 5    | 25 | 49 |
| 43 | 0    | 55 | 58 | 1    | 51 | 58 | 2    | 48 | 4  | 3    | 44 | 20 | 4    | 40 | 47 | 5    | 37 | 29 |
| 44 | 0    | 57 | 57 | 1    | 55 | 57 | 2    | 54 | 4  | 3    | 52 | 19 | 4    | 50 | 47 | 5    | 49 | 32 |
| 45 | 1    | 0  | 1  | 2    | 0  | 5  | 3    | 0  | 15 | 4    | 0  | 35 | 5    | 1  | 9  | 6    | 2  | 0  |
| 46 | 1    | 2  | 8  | 2    | 4  | 21 | 3    | 6  | 39 | 4    | 9  | 9  | 5    | 11 | 53 | 6    | 15 | 6  |
| 47 | 1    | 4  | 21 | 2    | 8  | 46 | 3    | 13 | 18 | 4    | 18 | 2  | 5    | 23 | 0  | 6    | 28 | 18 |
| 48 | 1    | 6  | 39 | 2    | 13 | 22 | 3    | 20 | 12 | 4    | 27 | 15 | 5    | 34 | 34 | 6    | 42 | 12 |
| 49 | 1    | 9  | 2  | 2    | 18 | 8  | 3    | 27 | 23 | 4    | 36 | 50 | 5    | 46 | 31 | 6    | 56 | 41 |
| 50 | 1    | 11 | 31 | 2    | 23 | 7  | 3    | 34 | 51 | 4    | 46 | 49 | 5    | 59 | 5  | 7    | 11 | 24 |
| 51 | 1    | 14 | 6  | 2    | 28 | 18 | 3    | 42 | 39 | 4    | 57 | 21 | 6    | 12 | 9  | 7    | 27 | 28 |
| 52 | 1    | 16 | 49 | 2    | 33 | 42 | 3    | 50 | 47 | 5    | 8  | 6  | 6    | 25 | 46 | 7    | 43 | 53 |
| 53 | 1    | 19 | 39 | 2    | 39 | 22 | 3    | 59 | 17 | 5    | 19 | 28 | 6    | 40 | 2  | 8    | 1  | 4  |
| 54 | 1    | 22 | 36 | 2    | 45 | 18 | 4    | 8  | 12 | 5    | 31 | 23 | 6    | 54 | 59 | 8    | 19 | 4  |
| 55 | 1    | 25 | 42 | 2    | 51 | 31 | 4    | 17 | 33 | 5    | 43 | 53 | 7    | 10 | 40 | 8    | 27 | 50 |
| 56 | 1    | 28 | 59 | 2    | 58 | 4  | 4    | 27 | 23 | 5    | 57 | 2  | 7    | 27 | 10 | 8    | 57 | 53 |
| 57 | 1    | 32 | 25 | 3    | 4  | 57 | 4    | 37 | 44 | 6    | 10 | 53 | 7    | 44 | 33 | 9    | 18 | 51 |
| 58 | 1    | 36 | 3  | 3    | 12 | 13 | 4    | 48 | 40 | 6    | 25 | 31 | 8    | 2  | 5  | 9    | 41 | 0  |
| 59 | 1    | 39 | 53 | 3    | 19 | 57 | 5    | 0  | 14 | 6    | 40 | 59 | 8    | 22 | 21 | 10   | 4  | 27 |
| 60 | 1    | 43 | 57 | 3    | 28 | 4  | 5    | 12 | 29 | 6    | 57 | 24 | 8    | 42 | 57 | 10   | 29 | 21 |



# CANON DIFFERENTIARVM

Gradus declinationis uel

Gradus declinationis uel exaltationis Poli.

|    | 1    |    |    | 2    |    |    | 3    |    |    | 4    |    |    | 5    |    |    | 6    |    |    |
|----|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|
|    | tem. | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // |
| 60 | 1    | 43 | 57 | 3    | 28 | 4  | 5    | 12 | 29 | 6    | 57 | 24 | 8    | 42 | 57 | 10   | 29 | 21 |
| 61 | 1    | 48 | 17 | 3    | 36 | 43 | 5    | 25 | 31 | 7    | 14 | 50 | 9    | 4  | 53 | 10   | 55 | 49 |
| 62 | 1    | 52 | 53 | 3    | 45 | 57 | 5    | 39 | 24 | 7    | 33 | 26 | 9    | 28 | 14 | 11   | 24 | 4  |
| 63 | 1    | 57 | 48 | 3    | 55 | 48 | 5    | 54 | 13 | 7    | 53 | 18 | 9    | 53 | 14 | 11   | 54 | 16 |
| 64 | 2    | 3  | 4  | 4    | 6  | 21 | 6    | 10 | 6  | 8    | 14 | 35 | 10   | 20 | 1  | 12   | 26 | 41 |
| 65 | 2    | 8  | 43 | 4    | 17 | 41 | 6    | 27 | 11 | 8    | 37 | 28 | 10   | 48 | 50 | 13   | 1  | 35 |
| 66 | 2    | 14 | 49 | 4    | 29 | 55 | 6    | 45 | 36 | 9    | 2  | 10 | 11   | 19 | 57 | 13   | 39 | 17 |
| 67 | 2    | 21 | 25 | 4    | 43 | 8  | 7    | 5  | 33 | 9    | 28 | 56 | 11   | 53 | 19 | 14   | 20 | 10 |
| 68 | 2    | 28 | 34 | 4    | 57 | 30 | 7    | 27 | 11 | 9    | 58 | 0  | 12   | 30 | 22 | 15   | 4  | 43 |
| 69 | 2    | 36 | 23 | 5    | 13 | 10 | 7    | 50 | 49 | 10   | 29 | 46 | 13   | 10 | 28 | 15   | 53 | 28 |
| 70 | 2    | 44 | 55 | 5    | 30 | 21 | 8    | 16 | 44 | 11   | 4  | 36 | 13   | 54 | 31 | 16   | 47 | 5  |
| 71 | 2    | 54 | 21 | 5    | 49 | 15 | 8    | 45 | 17 | 11   | 43 | 2  | 14   | 43 | 10 | 17   | 46 | 23 |
| 72 | 3    | 4  | 43 | 6    | 10 | 11 | 9    | 16 | 56 | 12   | 25 | 41 | 15   | 37 | 14 | 18   | 52 | 25 |
| 73 | 3    | 16 | 23 | 6    | 33 | 31 | 9    | 52 | 13 | 13   | 13 | 19 | 16   | 37 | 43 | 20   | 6  | 27 |
| 74 | 3    | 29 | 24 | 6    | 59 | 42 | 10   | 31 | 52 | 14   | 6  | 53 | 17   | 45 | 54 | 21   | 30 | 10 |
| 75 | 3    | 44 | 7  | 7    | 29 | 19 | 11   | 16 | 45 | 15   | 7  | 40 | 19   | 3  | 26 | 23   | 5  | 42 |
| 76 | 4    | 0  | 53 | 8    | 3  | 5  | 12   | 8  | 2  | 16   | 17 | 16 | 20   | 32 | 32 | 24   | 55 | 58 |
| 77 | 4    | 20 | 11 | 8    | 42 | 0  | 13   | 7  | 15 | 17   | 37 | 53 | 22   | 16 | 8  | 27   | 4  | 54 |
| 78 | 4    | 42 | 38 | 9    | 27 | 22 | 14   | 16 | 27 | 19   | 12 | 25 | 24   | 18 | 20 | 29   | 38 | 8  |
| 79 | 5    | 9  | 8  | 10   | 20 | 58 | 15   | 38 | 28 | 21   | 3  | 58 | 26   | 44 | 59 | 32   | 43 | 57 |
| 80 | 5    | 40 | 53 | 11   | 25 | 22 | 17   | 17 | 27 | 23   | 21 | 51 | 29   | 44 | 50 | 36   | 35 | 23 |
| 81 | 6    | 19 | 19 | 12   | 44 | 15 | 19   | 19 | 22 | 26   | 11 | 59 | 33   | 31 | 51 | 41   | 34 | 32 |
| 82 | 7    | 8  | 6  | 14   | 23 | 14 | 21   | 53 | 41 | 29   | 50 | 16 | 38   | 30 | 1  | 48   | 24 | 20 |
| 83 | 8    | 10 | 24 | 16   | 31 | 25 | 25   | 15 | 59 | 34   | 42 | 58 | 45   | 26 | 31 | 58   | 52 | 20 |
| 84 | 9    | 33 | 37 | 19   | 24 | 20 | 29   | 54 | 34 | 41   | 42 | 22 | 56   | 20 | 47 | 90   | 0  | 0  |
| 85 | 11   | 30 | 33 | 23   | 31 | 30 | 36   | 48 | 47 | 53   | 3  | 38 | 90   | 0  | 0  |      |    |    |
| 86 | 14   | 27 | 21 | 29   | 57 | 35 | 48   | 32 | 40 | 90   | 0  | 0  |      |    |    |      |    |    |
| 87 | 19   | 27 | 21 | 41   | 47 | 5  | 90   | 0  | 0  |      |    |    |      |    |    |      |    |    |
| 88 | 36   | 50 | 49 | 90   | 0  | 0  |      |    |    |      |    |    |      |    |    |      |    |    |
| 89 | 90   | 0  | 0  |      |    |    |      |    |    |      |    |    |      |    |    |      |    |    |
| 90 |      |    |    |      |    |    |      |    |    |      |    |    |      |    |    |      |    |    |

Sequitur altera pars Canonis huius.



exaltationis Poli.

| 7    |   |    |    | 8    |    |    |  | 9    |    |    |  | 10   |    |    |  | 11   |    |    |  | 12   |    |    |  |
|------|---|----|----|------|----|----|--|------|----|----|--|------|----|----|--|------|----|----|--|------|----|----|--|
| tem. | / | // |    | tem. | /  | // |  | tem. | /  | // |  | tem. | /  | // |  | tem. | /  | // |  | tem. | /  | // |  |
| 1    | 0 | 7  | 22 | 0    | 8  | 26 |  | 0    | 9  | 30 |  | 0    | 10 | 35 |  | 0    | 11 | 39 |  | 0    | 12 | 45 |  |
| 2    | 0 | 14 | 45 | 0    | 16 | 52 |  | 0    | 19 | 1  |  | 0    | 21 | 10 |  | 0    | 23 | 20 |  | 0    | 25 | 31 |  |
| 3    | 0 | 22 | 7  | 0    | 25 | 19 |  | 0    | 28 | 32 |  | 0    | 31 | 46 |  | 0    | 35 | 1  |  | 0    | 38 | 18 |  |
| 4    | 0 | 29 | 31 | 0    | 33 | 47 |  | 0    | 38 | 4  |  | 0    | 42 | 23 |  | 0    | 46 | 44 |  | 0    | 51 | 9  |  |
| 5    | 0 | 36 | 56 | 0    | 42 | 16 |  | 0    | 47 | 38 |  | 0    | 53 | 2  |  | 0    | 58 | 28 |  | 1    | 3  | 56 |  |
| 6    | 0 | 44 | 22 | 0    | 50 | 47 |  | 0    | 57 | 14 |  | 1    | 3  | 43 |  | 1    | 10 | 14 |  | 1    | 16 | 48 |  |
| 7    | 0 | 51 | 50 | 0    | 59 | 20 |  | 1    | 6  | 52 |  | 1    | 14 | 26 |  | 1    | 23 | 5  |  | 1    | 29 | 44 |  |
| 8    | 0 | 59 | 20 | 1    | 7  | 54 |  | 1    | 16 | 32 |  | 1    | 25 | 12 |  | 1    | 33 | 56 |  | 1    | 42 | 43 |  |
| 9    | 1 | 6  | 52 | 1    | 16 | 32 |  | 1    | 26 | 15 |  | 1    | 36 | 2  |  | 1    | 45 | 51 |  | 1    | 55 | 45 |  |
| 10   | 1 | 14 | 26 | 1    | 25 | 12 |  | 1    | 36 | 2  |  | 1    | 46 | 54 |  | 1    | 57 | 31 |  | 2    | 8  | 53 |  |
| 11   | 1 | 23 | 5  | 1    | 33 | 56 |  | 1    | 45 | 51 |  | 1    | 57 | 31 |  | 2    | 9  | 56 |  | 2    | 22 | 5  |  |
| 12   | 1 | 29 | 44 | 1    | 42 | 43 |  | 1    | 55 | 45 |  | 2    | 8  | 53 |  | 2    | 22 | 5  |  | 2    | 35 | 22 |  |
| 13   | 1 | 37 | 28 | 1    | 51 | 34 |  | 2    | 5  | 44 |  | 2    | 19 | 59 |  | 2    | 34 | 19 |  | 2    | 48 | 46 |  |
| 14   | 1 | 45 | 15 | 2    | 0  | 29 |  | 2    | 15 | 47 |  | 2    | 31 | 11 |  | 2    | 46 | 40 |  | 3    | 2  | 16 |  |
| 15   | 1 | 53 | 7  | 2    | 9  | 29 |  | 2    | 25 | 56 |  | 2    | 42 | 29 |  | 2    | 59 | 8  |  | 3    | 15 | 54 |  |
| 16   | 2 | 1  | 4  | 2    | 18 | 34 |  | 2    | 36 | 11 |  | 2    | 53 | 53 |  | 3    | 11 | 43 |  | 3    | 29 | 39 |  |
| 17   | 2 | 9  | 5  | 2    | 27 | 45 |  | 2    | 46 | 32 |  | 3    | 5  | 25 |  | 3    | 24 | 25 |  | 3    | 43 | 34 |  |
| 18   | 2 | 17 | 11 | 2    | 37 | 2  |  | 2    | 57 | 0  |  | 3    | 17 | 4  |  | 3    | 37 | 16 |  | 3    | 57 | 37 |  |
| 19   | 2 | 25 | 23 | 2    | 46 | 25 |  | 3    | 7  | 35 |  | 3    | 28 | 51 |  | 3    | 50 | 16 |  | 4    | 11 | 50 |  |
| 20   | 2 | 33 | 41 | 2    | 55 | 56 |  | 3    | 18 | 17 |  | 3    | 40 | 47 |  | 4    | 3  | 25 |  | 4    | 26 | 13 |  |
| 21   | 2 | 42 | 6  | 3    | 5  | 33 |  | 3    | 29 | 8  |  | 3    | 52 | 52 |  | 4    | 16 | 45 |  | 4    | 40 | 48 |  |
| 22   | 2 | 50 | 37 | 3    | 15 | 18 |  | 3    | 40 | 8  |  | 4    | 5  | 7  |  | 4    | 30 | 16 |  | 4    | 55 | 35 |  |
| 23   | 2 | 59 | 15 | 3    | 25 | 12 |  | 3    | 51 | 18 |  | 4    | 17 | 33 |  | 4    | 43 | 58 |  | 5    | 10 | 35 |  |
| 24   | 3 | 8  | 2  | 3    | 35 | 15 |  | 4    | 2  | 37 |  | 4    | 30 | 9  |  | 4    | 57 | 53 |  | 5    | 25 | 51 |  |
| 25   | 3 | 16 | 56 | 3    | 45 | 27 |  | 4    | 14 | 8  |  | 4    | 42 | 59 |  | 5    | 12 | 2  |  | 5    | 41 | 18 |  |
| 26   | 3 | 26 | 0  | 3    | 55 | 50 |  | 4    | 25 | 50 |  | 4    | 56 | 1  |  | 5    | 26 | 24 |  | 5    | 57 | 2  |  |
| 27   | 3 | 35 | 13 | 4    | 6  | 23 |  | 4    | 37 | 44 |  | 5    | 9  | 17 |  | 5    | 41 | 2  |  | 6    | 13 | 3  |  |
| 28   | 3 | 44 | 36 | 4    | 17 | 8  |  | 4    | 49 | 51 |  | 5    | 22 | 47 |  | 5    | 55 | 56 |  | 6    | 29 | 21 |  |
| 29   | 3 | 54 | 10 | 4    | 28 | 5  |  | 5    | 2  | 12 |  | 5    | 36 | 33 |  | 6    | 11 | 8  |  | 6    | 45 | 59 |  |
| 30   | 4 | 3  | 55 | 4    | 39 | 15 |  | 5    | 14 | 48 |  | 5    | 50 | 35 |  | 6    | 26 | 37 |  | 7    | 2  | 57 |  |



# CANON DIFFERENTIARVM

Gradus declinationis uel

Gradus declinationis uel exaltationis Poli.

|    | 7    |    |    | 8    |    |    | 9    |    |    | 10   |    |    | 11   |    |    | 12   |    |    |
|----|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|
|    | tem. | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // |
| 30 | 4    | 3  | 55 | 4    | 39 | 15 | 5    | 14 | 48 | 5    | 50 | 35 | 6    | 26 | 37 | 7    | 2  | 57 |
| 31 | 4    | 13 | 52 | 4    | 50 | 39 | 5    | 27 | 39 | 6    | 4  | 55 | 6    | 42 | 26 | 7    | 20 | 16 |
| 32 | 4    | 24 | 1  | 5    | 2  | 18 | 5    | 40 | 48 | 6    | 19 | 33 | 6    | 58 | 36 | 7    | 37 | 57 |
| 33 | 4    | 34 | 25 | 5    | 14 | 12 | 5    | 54 | 14 | 6    | 34 | 31 | 7    | 15 | 7  | 7    | 56 | 3  |
| 34 | 4    | 45 | 3  | 5    | 26 | 23 | 6    | 7  | 58 | 6    | 49 | 50 | 7    | 32 | 2  | 8    | 14 | 34 |
| 35 | 4    | 55 | 56 | 5    | 38 | 31 | 6    | 22 | 3  | 7    | 5  | 32 | 7    | 49 | 22 | 8    | 33 | 33 |
| 36 | 5    | 7  | 5  | 5    | 51 | 39 | 6    | 36 | 29 | 7    | 21 | 38 | 8    | 7  | 8  | 8    | 53 | 2  |
| 37 | 5    | 18 | 32 | 6    | 4  | 46 | 6    | 51 | 18 | 7    | 38 | 8  | 8    | 25 | 22 | 9    | 13 | 1  |
| 38 | 5    | 30 | 18 | 6    | 18 | 15 | 7    | 6  | 30 | 7    | 55 | 6  | 8    | 44 | 7  | 9    | 33 | 33 |
| 39 | 5    | 42 | 23 | 6    | 32 | 6  | 7    | 22 | 9  | 8    | 12 | 33 | 9    | 3  | 23 | 9    | 54 | 41 |
| 40 | 5    | 54 | 49 | 6    | 46 | 22 | 7    | 38 | 15 | 8    | 30 | 31 | 9    | 23 | 14 | 10   | 16 | 26 |
| 41 | 6    | 7  | 38 | 7    | 1  | 3  | 7    | 54 | 50 | 8    | 49 | 2  | 9    | 43 | 41 | 10   | 38 | 52 |
| 42 | 6    | 20 | 51 | 7    | 16 | 12 | 8    | 12 | 4  | 9    | 8  | 7  | 10   | 4  | 48 | 11   | 2  | 1  |
| 43 | 6    | 34 | 29 | 7    | 31 | 51 | 8    | 29 | 37 | 9    | 27 | 51 | 10   | 16 | 36 | 11   | 25 | 57 |
| 44 | 6    | 48 | 35 | 7    | 48 | 1  | 8    | 47 | 53 | 9    | 48 | 15 | 10   | 49 | 9  | 11   | 50 | 41 |
| 45 | 7    | 3  | 9  | 8    | 4  | 45 | 9    | 6  | 48 | 10   | 9  | 22 | 11   | 12 | 31 | 12   | 16 | 20 |
| 46 | 7    | 18 | 17 | 8    | 22 | 6  | 9    | 26 | 24 | 10   | 31 | 15 | 11   | 36 | 44 | 12   | 42 | 55 |
| 47 | 7    | 33 | 58 | 8    | 40 | 6  | 9    | 46 | 44 | 10   | 53 | 59 | 12   | 1  | 53 | 13   | 10 | 33 |
| 48 | 7    | 50 | 16 | 8    | 58 | 46 | 10   | 7  | 53 | 11   | 17 | 37 | 12   | 28 | 2  | 13   | 39 | 17 |
| 49 | 8    | 7  | 13 | 9    | 18 | 15 | 10   | 29 | 54 | 11   | 42 | 12 | 12   | 55 | 16 | 14   | 9  | 2  |
| 50 | 8    | 24 | 52 | 9    | 38 | 32 | 10   | 52 | 49 | 12   | 7  | 50 | 13   | 23 | 40 | 14   | 40 | 26 |
| 51 | 8    | 43 | 17 | 9    | 59 | 41 | 11   | 16 | 46 | 12   | 34 | 36 | 13   | 53 | 20 | 15   | 13 | 3  |
| 52 | 9    | 2  | 31 | 10   | 21 | 47 | 11   | 41 | 47 | 13   | 2  | 37 | 14   | 24 | 23 | 15   | 47 | 13 |
| 53 | 9    | 22 | 40 | 10   | 44 | 56 | 12   | 8  | 0  | 13   | 31 | 57 | 14   | 46 | 55 | 16   | 23 | 2  |
| 54 | 9    | 43 | 47 | 11   | 9  | 13 | 12   | 35 | 30 | 14   | 2  | 45 | 15   | 31 | 5  | 17   | 0  | 40 |
| 55 | 10   | 5  | 58 | 11   | 34 | 45 | 13   | 4  | 24 | 14   | 35 | 8  | 16   | 7  | 2  | 17   | 40 | 18 |
| 56 | 10   | 29 | 18 | 12   | 1  | 35 | 13   | 34 | 51 | 15   | 9  | 15 | 16   | 44 | 57 | 18   | 22 | 7  |
| 57 | 10   | 53 | 56 | 12   | 29 | 55 | 14   | 7  | 0  | 15   | 45 | 18 | 17   | 25 | 1  | 19   | 6  | 20 |
| 58 | 11   | 19 | 56 | 12   | 59 | 53 | 14   | 40 | 59 | 16   | 23 | 26 | 18   | 7  | 27 | 19   | 52 | 12 |
| 59 | 11   | 47 | 29 | 13   | 31 | 34 | 15   | 17 | 2  | 17   | 4  | 5  | 18   | 52 | 30 | 20   | 43 | 2  |
| 60 | 12   | 16 | 44 | 14   | 5  | 20 | 15   | 55 | 21 | 17   | 46 | 59 | 19   | 40 | 29 | 21   | 36 | 8  |



exaltationis Poli.

|    | 7    |    |    | 8    |    |    | 9    |    |    | 10   |    |    | 11   |    |    | 12   |    |    |
|----|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|
|    | tem. | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // | tem. | /  | // |
| 60 | 12   | 16 | 44 | 14   | 5  | 20 | 15   | 55 | 21 | 17   | 46 | 59 | 19   | 40 | 29 | 21   | 36 | 8  |
| 61 | 12   | 47 | 53 | 14   | 42 | 15 | 16   | 36 | 18 | 18   | 32 | 55 | 20   | 31 | 43 | 22   | 33 | 6  |
| 62 | 13   | 21 | 6  | 15   | 19 | 36 | 17   | 19 | 50 | 19   | 22 | 4  | 21   | 26 | 35 | 23   | 33 | 48 |
| 63 | 13   | 56 | 40 | 16   | 0  | 42 | 18   | 6  | 38 | 20   | 14 | 49 | 22   | 25 | 34 | 24   | 39 | 21 |
| 64 | 14   | 34 | 51 | 16   | 44 | 51 | 18   | 57 | 0  | 21   | 11 | 39 | 23   | 29 | 13 | 25   | 50 | 11 |
| 65 | 15   | 16 | 1  | 17   | 32 | 29 | 19   | 51 | 23 | 22   | 13 | 6  | 24   | 38 | 9  | 27   | 7  | 5  |
| 66 | 16   | 0  | 31 | 18   | 24 | 3  | 20   | 50 | 20 | 23   | 19 | 51 | 25   | 53 | 11 | 28   | 30 | 59 |
| 67 | 16   | 48 | 51 | 19   | 20 | 8  | 21   | 54 | 33 | 24   | 32 | 41 | 27   | 15 | 14 | 30   | 2  | 59 |
| 68 | 17   | 41 | 33 | 20   | 21 | 22 | 23   | 4  | 49 | 25   | 52 | 35 | 28   | 45 | 28 | 31   | 44 | 31 |
| 69 | 18   | 39 | 18 | 21   | 28 | 37 | 24   | 23 | 8  | 27   | 20 | 43 | 30   | 25 | 22 | 33   | 37 | 22 |
| 70 | 19   | 42 | 56 | 22   | 42 | 52 | 25   | 47 | 45 | 28   | 58 | 38 | 32   | 16 | 48 | 35   | 43 | 56 |
| 71 | 20   | 53 | 29 | 24   | 5  | 23 | 27   | 23 | 11 | 30   | 48 | 13 | 34   | 22 | 9  | 38   | 7  | 11 |
| 72 | 22   | 12 | 12 | 25   | 37 | 46 | 29   | 10 | 27 | 32   | 52 | 0  | 36   | 44 | 39 | 40   | 51 | 27 |
| 73 | 23   | 40 | 45 | 27   | 22 | 3  | 31   | 12 | 8  | 35   | 13 | 19 | 39   | 28 | 43 | 44   | 2  | 46 |
| 74 | 25   | 21 | 13 | 29   | 20 | 57 | 33   | 31 | 45 | 37   | 56 | 11 | 42   | 40 | 58 | 47   | 50 | 24 |
| 75 | 27   | 16 | 26 | 31   | 38 | 13 | 36   | 14 | 8  | 41   | 9  | 18 | 46   | 30 | 20 | 52   | 29 | 32 |
| 76 | 29   | 30 | 10 | 34   | 18 | 40 | 39   | 26 | 20 | 45   | 0  | 32 | 51   | 13 | 33 | 58   | 29 | 9  |
| 77 | 32   | 7  | 49 | 37   | 30 | 0  | 43   | 19 | 6  | 49   | 47 | 50 | 57   | 20 | 50 | 67   | 1  | 34 |
| 78 | 35   | 17 | 11 | 41   | 23 | 30 | 48   | 10 | 19 | 56   | 3  | 14 | 66   | 8  | 0  | 90   | 0  | 0  |
| 79 | 39   | 10 | 27 | 46   | 18 | 19 | 54   | 34 | 14 | 65   | 6  | 44 | 90   | 0  | 0  |      |    |    |
| 80 | 44   | 8  | 7  | 52   | 51 | 1  | 63   | 55 | 12 | 90   | 0  | 0  |      |    |    |      |    |    |
| 81 | 50   | 49 | 37 | 62   | 32 | 33 | 90   | 0  | 0  |      |    |    |      |    |    |      |    |    |
| 82 | 60   | 53 | 13 | 90   | 0  | 0  |      |    |    |      |    |    |      |    |    |      |    |    |
| 83 | 90   | 0  | 0  |      |    |    |      |    |    |      |    |    |      |    |    |      |    |    |

Sequitur tertiapars Canonis huius.

6 4



# CANON DIFFERENTIARVM

Gradus declinationis uel

|    | 13   |    | 14   |    | 15   |    | 16   |    | 17   |    | 18   |    | 19   |    |
|----|------|----|------|----|------|----|------|----|------|----|------|----|------|----|
|    | tem. | /  | tem. | /  | tem. | /  | tem. | /  | tem. | /  | tem. | /  | tem. | /  |
| 13 | 3    | 3  | 3    | 18 | 3    | 33 | 3    | 48 | 4    | 3  | 4    | 18 | 4    | 34 |
| 14 | 3    | 18 | 3    | 36 | 3    | 50 | 4    | 6  | 4    | 22 | 4    | 39 | 4    | 55 |
| 15 | 3    | 33 | 3    | 50 | 4    | 7  | 4    | 24 | 4    | 42 | 5    | 0  | 5    | 18 |
| 16 | 3    | 48 | 4    | 6  | 4    | 24 | 4    | 43 | 5    | 2  | 5    | 21 | 5    | 40 |
| 17 | 4    | 3  | 4    | 22 | 4    | 42 | 5    | 2  | 5    | 22 | 5    | 42 | 6    | 3  |
| 18 | 4    | 18 | 4    | 39 | 5    | 0  | 5    | 21 | 5    | 42 | 6    | 4  | 6    | 25 |
| 19 | 4    | 34 | 4    | 55 | 5    | 18 | 5    | 40 | 6    | 3  | 6    | 25 | 6    | 49 |
| 20 | 4    | 49 | 5    | 12 | 5    | 36 | 5    | 59 | 6    | 23 | 6    | 47 | 7    | 12 |
| 21 | 5    | 5  | 5    | 30 | 5    | 54 | 6    | 19 | 6    | 44 | 7    | 10 | 7    | 36 |
| 22 | 5    | 21 | 5    | 47 | 6    | 13 | 6    | 39 | 7    | 6  | 7    | 33 | 8    | 0  |
| 23 | 5    | 37 | 6    | 5  | 6    | 32 | 6    | 59 | 7    | 27 | 7    | 56 | 8    | 24 |
| 24 | 5    | 54 | 6    | 22 | 6    | 51 | 7    | 20 | 7    | 49 | 7    | 19 | 8    | 49 |
| 25 | 6    | 11 | 6    | 41 | 7    | 11 | 7    | 41 | 8    | 12 | 8    | 43 | 9    | 14 |
| 26 | 6    | 28 | 6    | 59 | 7    | 31 | 8    | 2  | 8    | 35 | 9    | 7  | 9    | 40 |
| 27 | 6    | 45 | 7    | 18 | 7    | 51 | 8    | 24 | 8    | 58 | 9    | 32 | 10   | 6  |
| 28 | 7    | 3  | 7    | 37 | 8    | 11 | 8    | 46 | 9    | 21 | 9    | 57 | 10   | 33 |
| 29 | 7    | 21 | 7    | 57 | 8    | 32 | 9    | 9  | 9    | 45 | 10   | 23 | 11   | 0  |
| 30 | 7    | 40 | 8    | 17 | 8    | 54 | 9    | 32 | 10   | 10 | 10   | 49 | 11   | 28 |
| 31 | 7    | 58 | 8    | 37 | 9    | 16 | 9    | 55 | 10   | 35 | 11   | 15 | 11   | 56 |
| 32 | 8    | 18 | 8    | 58 | 9    | 38 | 10   | 19 | 11   | 1  | 11   | 43 | 12   | 25 |
| 33 | 8    | 37 | 9    | 19 | 10   | 1  | 10   | 44 | 11   | 27 | 12   | 11 | 12   | 55 |
| 34 | 8    | 57 | 9    | 41 | 10   | 25 | 11   | 9  | 11   | 54 | 12   | 40 | 13   | 26 |
| 35 | 9    | 18 | 10   | 3  | 10   | 49 | 11   | 35 | 12   | 22 | 13   | 9  | 13   | 57 |
| 36 | 9    | 39 | 10   | 26 | 11   | 13 | 12   | 1  | 12   | 50 | 13   | 39 | 14   | 29 |
| 37 | 10   | 1  | 10   | 50 | 11   | 39 | 12   | 29 | 13   | 19 | 14   | 10 | 15   | 2  |
| 38 | 10   | 23 | 11   | 14 | 12   | 5  | 12   | 57 | 13   | 49 | 14   | 42 | 15   | 36 |
| 39 | 10   | 46 | 11   | 39 | 12   | 32 | 13   | 26 | 14   | 20 | 15   | 15 | 16   | 11 |
| 40 | 11   | 10 | 12   | 5  | 13   | 0  | 13   | 55 | 14   | 51 | 15   | 49 | 16   | 48 |
| 41 | 11   | 35 | 12   | 31 | 13   | 28 | 14   | 26 | 15   | 25 | 16   | 24 | 17   | 25 |
| 42 | 12   | 0  | 12   | 58 | 13   | 58 | 14   | 58 | 15   | 59 | 17   | 1  | 18   | 4  |
| 43 | 12   | 26 | 13   | 27 | 14   | 28 | 15   | 31 | 16   | 34 | 17   | 38 | 18   | 44 |
| 44 | 12   | 53 | 13   | 56 | 15   | 0  | 16   | 5  | 17   | 10 | 18   | 17 | 19   | 25 |
| 45 | 13   | 21 | 14   | 26 | 15   | 33 | 16   | 40 | 17   | 48 | 18   | 58 | 20   | 8  |
| 46 | 13   | 50 | 14   | 58 | 16   | 7  | 17   | 16 | 18   | 27 | 19   | 40 | 20   | 53 |

Gradus declinationis uel exaltationis Poli,



exaltationis Poli.

|    | 13     | 14     | 15     | 16     | 17     | 18     | 19     |
|----|--------|--------|--------|--------|--------|--------|--------|
|    | tem. / | tem. / | tem. / | tem. / | tem. / | tem. / | tem. / |
| 46 | 13 50  | 14 58  | 16 7   | 17 16  | 18 27  | 19 40  | 20 53  |
| 47 | 14 20  | 15 30  | 16 42  | 17 54  | 19 8   | 20 23  | 21 40  |
| 48 | 14 51  | 16 5   | 17 19  | 18 34  | 19 51  | 21 9   | 22 29  |
| 49 | 15 24  | 16 40  | 17 57  | 19 16  | 20 36  | 21 57  | 23 20  |
| 50 | 15 58  | 17 17  | 18 37  | 19 59  | 21 22  | 22 47  | 24 15  |
| 51 | 16 34  | 17 56  | 19 19  | 20 44  | 22 11  | 23 39  | 25 10  |
| 52 | 17 11  | 18 37  | 20 3   | 21 32  | 23 2   | 24 34  | 26 9   |
| 53 | 17 50  | 19 19  | 20 50  | 22 22  | 23 56  | 25 33  | 27 11  |
| 54 | 18 32  | 20 4   | 21 38  | 23 15  | 24 53  | 26 34  | 28 17  |
| 55 | 19 15  | 20 52  | 22 30  | 24 10  | 25 53  | 27 39  | 29 27  |
| 56 | 20 1   | 21 42  | 23 24  | 25 9   | 26 57  | 28 48  | 30 42  |
| 57 | 20 49  | 22 35  | 24 22  | 26 12  | 28 5   | 30 1   | 32 1   |
| 58 | 21 41  | 23 31  | 25 23  | 27 19  | 29 18  | 31 20  | 33 26  |
| 59 | 22 36  | 24 31  | 26 29  | 28 30  | 30 35  | 32 44  | 34 58  |
| 60 | 23 34  | 25 35  | 27 39  | 29 47  | 31 58  | 34 15  | 36 37  |
| 61 | 24 37  | 26 44  | 28 54  | 31 9   | 33 28  | 35 53  | 38 24  |
| 62 | 25 44  | 27 58  | 30 16  | 32 38  | 35 6   | 37 40  | 40 22  |
| 63 | 26 57  | 29 18  | 31 44  | 34 15  | 36 52  | 39 37  | 42 31  |
| 64 | 28 15  | 30 45  | 33 19  | 36 1   | 38 49  | 41 46  | 44 54  |
| 65 | 29 41  | 32 10  | 35 4   | 37 56  | 40 58  | 44 10  | 47 36  |
| 66 | 31 14  | 34 3   | 37 0   | 40 6   | 43 22  | 46 52  | 50 39  |
| 67 | 32 57  | 35 58  | 39 8   | 42 30  | 46 4   | 49 56  | 54 13  |
| 68 | 34 51  | 38 6   | 41 33  | 45 13  | 49 10  | 53 32  | 58 27  |
| 69 | 36 58  | 40 30  | 44 16  | 48 20  | 52 48  | 57 50  | 63 47  |
| 70 | 39 22  | 43 14  | 47 24  | 51 59  | 57 8   | 63 13  | 71 5   |
| 71 | 42 6   | 46 23  | 51 6   | 56 23  | 62 37  | 70 40  | 90 0   |
| 72 | 45 17  | 50 7   | 55 33  | 61 57  | 70 12  | 90 0   |        |
| 73 | 49 2   | 54 38  | 61 13  | 69 42  | 90 0   |        |        |
| 74 | 53 37  | 60 17  | 69 8   | 90 0   |        |        |        |
| 75 | 59 30  | 68 31  | 90 0   |        |        |        |        |
| 76 | 67 49  | 90 0   |        |        |        |        |        |
| 77 | 90 0   |        |        |        |        |        |        |

Sequitur quarta pars Canonis huius.

d



# CANON DIFFERENTIARVM

Gradus declinationis uel

Gradus declinationis uel exaltationis Poli

|    | 20    | 21    | 22    | 23    | 24    | 25    | 26    |
|----|-------|-------|-------|-------|-------|-------|-------|
|    | tem.  | tem.  | tem.  | tem.  | tem.  | tem.  | tem.  |
| 20 | 7 37  | 8 2   | 8 27  | 8 53  | 9 20  | 9 46  | 10 14 |
| 21 | 8 2   | 8 28  | 8 55  | 9 23  | 9 50  | 10 19 | 10 47 |
| 22 | 8 27  | 8 55  | 9 24  | 9 52  | 10 22 | 10 51 | 11 22 |
| 23 | 8 53  | 9 23  | 9 52  | 10 23 | 10 54 | 11 25 | 11 57 |
| 24 | 9 20  | 9 50  | 10 22 | 10 54 | 11 26 | 11 59 | 12 33 |
| 25 | 9 46  | 10 19 | 10 52 | 11 25 | 11 59 | 12 34 | 13 9  |
| 26 | 10 14 | 10 47 | 11 22 | 11 57 | 12 35 | 13 9  | 13 46 |
| 27 | 10 41 | 11 17 | 11 53 | 12 29 | 13 7  | 13 45 | 14 23 |
| 28 | 11 10 | 11 47 | 12 24 | 13 3  | 13 42 | 14 21 | 15 2  |
| 29 | 11 38 | 12 17 | 12 56 | 13 37 | 14 17 | 14 59 | 15 41 |
| 30 | 12 8  | 12 49 | 13 29 | 14 11 | 14 54 | 15 37 | 16 21 |
| 31 | 12 38 | 13 20 | 14 3  | 14 47 | 15 31 | 16 16 | 17 2  |
| 32 | 13 9  | 13 53 | 14 37 | 15 23 | 16 9  | 16 56 | 17 45 |
| 33 | 13 40 | 14 26 | 15 13 | 16 0  | 16 48 | 17 38 | 18 27 |
| 34 | 14 13 | 15 0  | 15 49 | 16 38 | 17 29 | 18 20 | 19 12 |
| 35 | 14 46 | 15 36 | 16 26 | 17 17 | 18 10 | 19 3  | 19 58 |
| 36 | 15 20 | 16 12 | 17 4  | 17 58 | 18 53 | 19 48 | 20 45 |
| 37 | 15 55 | 16 49 | 17 44 | 18 39 | 19 36 | 20 34 | 21 34 |
| 38 | 16 31 | 17 27 | 18 24 | 19 22 | 20 21 | 21 22 | 22 24 |
| 39 | 17 8  | 18 6  | 19 6  | 20 6  | 21 8  | 22 11 | 23 16 |
| 40 | 17 47 | 18 47 | 19 49 | 20 52 | 21 56 | 23 2  | 24 9  |
| 41 | 18 27 | 19 30 | 20 34 | 21 39 | 22 46 | 23 55 | 25 5  |
| 42 | 19 8  | 20 13 | 21 20 | 22 28 | 23 38 | 24 50 | 26 3  |
| 43 | 19 50 | 20 59 | 22 8  | 23 19 | 24 33 | 25 46 | 27 3  |
| 44 | 20 35 | 21 45 | 22 58 | 24 12 | 25 28 | 26 45 | 28 6  |
| 45 | 21 21 | 22 34 | 23 50 | 25 7  | 26 26 | 27 48 | 29 11 |
| 46 | 22 9  | 23 26 | 24 44 | 26 5  | 27 17 | 28 52 | 30 20 |
| 47 | 22 58 | 24 18 | 25 40 | 27 5  | 28 31 | 30 0  | 31 32 |
| 48 | 23 51 | 25 14 | 26 40 | 28 8  | 29 38 | 31 11 | 32 47 |
| 49 | 24 45 | 26 12 | 27 42 | 29 14 | 30 49 | 32 26 | 34 8  |
| 50 | 25 42 | 27 13 | 28 47 | 30 23 | 32 3  | 33 46 | 35 33 |



exaltationis Poli.

|    | 29     | 21     | 22     | 23     | 24     | 25     | 26     |
|----|--------|--------|--------|--------|--------|--------|--------|
|    | tem. / | tem. / | tem. / | tem. / | tem. / | tem. / | tem. / |
| 30 | 25 42  | 27 13  | 28 47  | 30 23  | 32 3   | 33 46  | 35 33  |
| 51 | 26 13  | 28 17  | 29 56  | 31 37  | 33 21  | 35 9   | 37 2   |
| 52 | 27 46  | 29 26  | 31 8   | 32 54  | 34 44  | 36 39  | 38 38  |
| 53 | 28 53  | 30 37  | 32 25  | 34 17  | 36 13  | 38 14  | 40 20  |
| 54 | 30 4   | 31 54  | 33 47  | 35 45  | 37 48  | 39 56  | 42 10  |
| 55 | 31 19  | 33 14  | 35 14  | 37 19  | 39 29  | 41 45  | 44 9   |
| 56 | 32 39  | 34 41  | 36 48  | 38 59  | 41 18  | 43 44  | 46 19  |
| 57 | 34 5   | 36 14  | 38 28  | 40 49  | 43 17  | 45 53  | 48 40  |
| 58 | 35 37  | 37 54  | 40 17  | 42 47  | 45 27  | 48 16  | 51 19  |
| 59 | 37 17  | 39 42  | 42 16  | 44 57  | 47 49  | 50 54  | 54 16  |
| 60 | 39 5   | 41 40  | 44 25  | 47 19  | 50 27  | 53 52  | 57 39  |
| 61 | 41 3   | 43 50  | 46 48  | 49 59  | 53 26  | 57 16  | 61 38  |
| 62 | 43 12  | 46 12  | 49 27  | 52 58  | 56 52  | 61 17  | 66 32  |
| 63 | 45 35  | 48 53  | 52 28  | 56 25  | 60 54  | 66 14  | 73 11  |
| 64 | 48 16  | 51 55  | 55 55  | 60 29  | 65 54  | 72 57  | 90 0   |
| 65 | 51 19  | 55 23  | 60 3   | 65 31  | 72 42  | 90 0   |        |
| 66 | 54 50  | 59 34  | 65 9   | 72 16  | 90 0   |        |        |
| 67 | 59 2   | 64 44  | 72 8   | 90 0   |        |        |        |
| 68 | 64 16  | 71 49  | 90 0   |        |        |        |        |
| 69 | 71 28  | 90 0   |        |        |        |        |        |
| 70 | 90 0   |        |        |        |        |        |        |

Sequitur quinta pars Canonis huius ac reliquæ suo ordine.

d 2



# CANON DIFFERENTIARVM

Gradus declinationis uel

|    | 27   |    | 28   |    | 29   |    | 30   |    | 31   |    | 32   |    | 33   |    |
|----|------|----|------|----|------|----|------|----|------|----|------|----|------|----|
|    | tem. | /  | tem. | /  | tem. | /  | tem. | /  | tem. | /  | tem. | /  | tem. | /  |
| 27 | 15   | 3  | 15   | 43 | 16   | 24 | 17   | 6  | 17   | 50 | 18   | 34 | 19   | 20 |
| 28 | 15   | 41 | 16   | 25 | 17   | 8  | 17   | 53 | 18   | 37 | 19   | 24 | 20   | 12 |
| 29 | 16   | 24 | 17   | 8  | 17   | 54 | 18   | 40 | 19   | 27 | 20   | 16 | 21   | 6  |
| 30 | 17   | 6  | 17   | 53 | 18   | 40 | 19   | 28 | 20   | 18 | 21   | 9  | 22   | 1  |
| 31 | 17   | 50 | 18   | 37 | 19   | 27 | 20   | 18 | 21   | 10 | 22   | 3  | 22   | 58 |
| 32 | 18   | 34 | 19   | 24 | 20   | 16 | 21   | 9  | 22   | 3  | 22   | 59 | 13   | 56 |
| 33 | 19   | 20 | 20   | 12 | 21   | 6  | 22   | 1  | 22   | 58 | 23   | 56 | 24   | 57 |
| 34 | 20   | 6  | 21   | 1  | 21   | 57 | 22   | 55 | 23   | 55 | 24   | 56 | 25   | 59 |
| 35 | 20   | 54 | 21   | 51 | 22   | 50 | 23   | 51 | 24   | 53 | 25   | 57 | 27   | 3  |
| 36 | 21   | 44 | 22   | 44 | 23   | 45 | 24   | 48 | 25   | 53 | 27   | 0  | 28   | 9  |
| 37 | 22   | 35 | 23   | 37 | 24   | 41 | 25   | 47 | 26   | 55 | 28   | 5  | 29   | 18 |
| 38 | 23   | 28 | 24   | 33 | 25   | 40 | 26   | 49 | 28   | 0  | 29   | 13 | 30   | 29 |
| 39 | 24   | 22 | 25   | 30 | 26   | 40 | 27   | 52 | 29   | 7  | 30   | 23 | 31   | 44 |
| 40 | 25   | 19 | 26   | 30 | 27   | 43 | 28   | 59 | 30   | 17 | 31   | 37 | 33   | 1  |
| 41 | 26   | 17 | 27   | 32 | 28   | 48 | 30   | 7  | 31   | 29 | 32   | 54 | 34   | 22 |
| 42 | 27   | 18 | 28   | 36 | 29   | 56 | 31   | 19 | 32   | 45 | 34   | 15 | 35   | 47 |
| 43 | 28   | 22 | 29   | 43 | 31   | 7  | 32   | 34 | 34   | 5  | 35   | 38 | 37   | 16 |
| 44 | 29   | 28 | 30   | 54 | 32   | 22 | 33   | 53 | 35   | 28 | 37   | 7  | 38   | 50 |
| 45 | 30   | 38 | 32   | 7  | 33   | 40 | 35   | 16 | 36   | 56 | 38   | 40 | 40   | 30 |
| 46 | 31   | 51 | 33   | 24 | 35   | 2  | 36   | 43 | 38   | 29 | 40   | 19 | 42   | 16 |
| 47 | 33   | 7  | 34   | 46 | 36   | 28 | 38   | 15 | 40   | 7  | 42   | 4  | 44   | 8  |
| 48 | 34   | 18 | 36   | 11 | 38   | 0  | 39   | 53 | 41   | 52 | 43   | 57 | 46   | 9  |
| 49 | 35   | 53 | 37   | 43 | 39   | 37 | 41   | 37 | 43   | 44 | 45   | 57 | 48   | 20 |
| 50 | 37   | 23 | 39   | 19 | 41   | 21 | 43   | 29 | 45   | 43 | 48   | 8  | 50   | 43 |
| 51 | 38   | 59 | 41   | 2  | 43   | 11 | 45   | 29 | 47   | 54 | 50   | 30 | 53   | 19 |
| 52 | 40   | 42 | 42   | 53 | 45   | 12 | 47   | 39 | 50   | 16 | 53   | 7  | 56   | 13 |
| 53 | 42   | 33 | 44   | 53 | 47   | 21 | 50   | 1  | 52   | 53 | 56   | 1  | 59   | 31 |
| 54 | 44   | 32 | 47   | 2  | 49   | 43 | 52   | 37 | 55   | 48 | 59   | 19 | 63   | 21 |
| 55 | 46   | 41 | 49   | 35 | 52   | 20 | 55   | 33 | 59   | 6  | 63   | 10 | 68   | 2  |
| 56 | 49   | 4  | 52   | 2  | 55   | 16 | 58   | 52 | 62   | 59 | 67   | 53 | 74   | 19 |
| 57 | 51   | 41 | 54   | 58 | 58   | 36 | 62   | 45 | 67   | 42 | 74   | 12 | 90   | 0  |
| 58 | 54   | 37 | 58   | 19 | 62   | 30 | 67   | 31 | 74   | 4  | 90   | 0  |      |    |
| 59 | 58   | 0  | 62   | 14 | 67   | 18 | 73   | 55 | 90   | 0  |      |    |      |    |
| 60 | 61   | 57 | 67   | 4  | 73   | 46 | 90   | 0  |      |    |      |    |      |    |
| 61 | 66   | 49 | 73   | 35 | 90   | 0  |      |    |      |    |      |    |      |    |
| 62 | 73   | 23 | 90   | 0  |      |    |      |    |      |    |      |    |      |    |
| 63 | 90   | 0  |      |    |      |    |      |    |      |    |      |    |      |    |

Gradus declinationis uel exaltationis Poli.



exaltationis Poli.

|    | 34     | 35     | 36     | 37     | 38     | 39     | 40     |
|----|--------|--------|--------|--------|--------|--------|--------|
|    | tem. / | tem. / | tem. / | tem. / | tem. / | tem. / | tem. / |
| 34 | 27 4   | 28 11  | 29 21  | 30 32  | 31 48  | 33 6   | 34 28  |
| 35 | 28 11  | 29 22  | 30 35  | 31 50  | 31 10  | 34 33  | 35 59  |
| 36 | 29 21  | 30 35  | 31 52  | 33 12  | 34 36  | 36 2   | 37 33  |
| 37 | 30 32  | 31 50  | 33 12  | 34 32  | 36 4   | 37 36  | 39 13  |
| 38 | 31 48  | 33 10  | 34 36  | 36 4   | 37 37  | 39 15  | 40 58  |
| 39 | 31 6   | 34 23  | 36 2   | 37 36  | 39 15  | 40 59  | 42 49  |
| 40 | 34 28  | 35 59  | 37 33  | 39 13  | 40 58  | 42 49  | 44 45  |
| 41 | 35 53  | 37 30  | 39 10  | 40 55  | 42 47  | 44 45  | 46 50  |
| 42 | 37 23  | 39 5   | 40 52  | 42 44  | 44 42  | 46 49  | 49 4   |
| 43 | 38 59  | 40 46  | 42 39  | 44 39  | 46 46  | 49 2   | 51 29  |
| 44 | 40 39  | 42 33  | 44 33  | 46 42  | 48 59  | 51 27  | 54 8   |
| 45 | 42 25  | 44 26  | 46 36  | 48 54  | 51 22  | 54 5   | 57 2   |
| 46 | 44 18  | 46 29  | 48 48  | 51 17  | 54 0   | 55 57  | 60 20  |
| 47 | 46 20  | 48 40  | 51 11  | 53 55  | 56 48  | 60 16  | 64 8   |
| 48 | 48 31  | 51 3   | 53 48  | 56 49  | 60 11  | 64 4   | 68 44  |
| 49 | 50 53  | 53 40  | 57 42  | 60 6   | 64 0   | 68 41  | 74 52  |
| 50 | 53 30  | 56 34  | 59 59  | 63 46  | 68 36  | 74 49  | 90 0   |
| 51 | 56 24  | 59 51  | 63 48  | 68 31  | 74 45  | 90 0   |        |
| 52 | 59 42  | 63 40  | 68 25  | 74 42  | 90 0   |        |        |
| 53 | 63 31  | 68 19  | 74 37  | 90 0   |        |        |        |
| 54 | 68 11  | 74 32  | 90 0   |        |        |        |        |
| 55 | 74 26  | 90 0   |        |        |        |        |        |
| 56 | 90 0   |        |        |        |        |        |        |



RELIQVVM ANTECEDENTIS CANONIS.

Gradus declinationis uel exaltationis Poli.

|    | 41   |    | 42   |    | 43   |    | 44   |    | 45   |    |
|----|------|----|------|----|------|----|------|----|------|----|
|    | tem. | /  | tem. | /  | tem. | /  | tem. | /  | tem. | /  |
| 41 | 49   | 5  | 51   | 31 | 54   | 9  | 57   | 5  | 60   | 23 |
| 42 | 51   | 31 | 54   | 10 | 57   | 6  | 60   | 24 | 64   | 13 |
| 43 | 54   | 9  | 57   | 6  | 60   | 24 | 64   | 14 | 68   | 49 |
| 44 | 57   | 5  | 60   | 24 | 64   | 14 | 68   | 13 | 74   | 57 |
| 45 | 60   | 23 | 64   | 13 | 68   | 49 | 74   | 57 | 90   | 0  |
| 46 | 64   | 10 | 68   | 49 | 74   | 56 | 90   | 0  |      |    |
| 47 | 68   | 47 | 74   | 55 | 90   | 0  |      |    |      |    |
| 48 | 74   | 54 | 90   | 0  |      |    |      |    |      |    |
| 49 | 90   | 0  |      |    |      |    |      |    |      |    |

**Finis Canonis differentiarum ascensionalium.**



SEQVITVR  
CANON SEV TABVLA  
positionum generalis.



# CANON SEV TABVLA POSIO

Elevatio Poli supra circulum positionis.

| Latitu. | 70 | 69   | 68 | 67   | 66 | 65   | 64 | rec  |    |      |    |      |    |      |
|---------|----|------|----|------|----|------|----|------|----|------|----|------|----|------|
| g       | g  | scr. | g  | scr. | g  | scr. | g  | scr. | g  | scr. | g  | scr. | g  | scr. |
| 1       | 0  | 22   | 0  | 23   | 0  | 24   | 0  | 26   | 0  | 27   | 0  | 28   | 0  | 29   |
| 2       | 0  | 43   | 0  | 46   | 0  | 48   | 0  | 51   | 0  | 53   | 0  | 56   | 0  | 58   |
| 3       | 1  | 5    | 1  | 9    | 1  | 13   | 1  | 17   | 1  | 20   | 1  | 24   | 1  | 28   |
| 4       | 1  | 27   | 1  | 32   | 1  | 37   | 1  | 42   | 1  | 47   | 1  | 52   | 1  | 57   |
| 5       | 1  | 49   | 1  | 55   | 2  | 2    | 2  | 8    | 2  | 14   | 2  | 20   | 2  | 27   |
| 6       | 2  | 11   | 2  | 18   | 2  | 26   | 2  | 34   | 2  | 41   | 2  | 48   | 2  | 56   |
| 7       | 2  | 34   | 2  | 42   | 2  | 51   | 3  | 0    | 3  | 8    | 3  | 17   | 3  | 26   |
| 8       | 2  | 56   | 3  | 5    | 3  | 16   | 3  | 26   | 3  | 35   | 3  | 45   | 3  | 56   |
| 9       | 3  | 18   | 3  | 29   | 3  | 41   | 3  | 52   | 4  | 3    | 4  | 14   | 4  | 26   |
| 10      | 3  | 40   | 3  | 53   | 4  | 6    | 4  | 18   | 4  | 30   | 4  | 43   | 4  | 56   |
| 11      | 4  | 3    | 4  | 17   | 4  | 31   | 4  | 45   | 4  | 58   | 5  | 12   | 5  | 26   |
| 12      | 4  | 26   | 4  | 41   | 4  | 56   | 5  | 11   | 5  | 26   | 5  | 41   | 5  | 57   |
| 13      | 4  | 49   | 5  | 6    | 5  | 22   | 5  | 38   | 5  | 54   | 6  | 11   | 6  | 28   |
| 14      | 5  | 12   | 5  | 30   | 5  | 47   | 6  | 5    | 6  | 22   | 6  | 41   | 6  | 59   |
| 15      | 5  | 36   | 5  | 55   | 6  | 13   | 6  | 32   | 6  | 51   | 7  | 11   | 7  | 31   |
| 16      | 5  | 59   | 6  | 20   | 6  | 39   | 6  | 59   | 7  | 20   | 7  | 41   | 8  | 3    |
| 17      | 6  | 23   | 6  | 45   | 7  | 6    | 7  | 27   | 7  | 49   | 8  | 12   | 8  | 35   |
| 18      | 6  | 47   | 7  | 10   | 7  | 33   | 7  | 55   | 8  | 19   | 8  | 43   | 9  | 7    |
| 19      | 7  | 12   | 7  | 36   | 8  | 0    | 8  | 24   | 8  | 49   | 9  | 14   | 9  | 40   |
| 20      | 7  | 37   | 8  | 2    | 8  | 28   | 8  | 53   | 9  | 20   | 9  | 46   | 10 | 13   |
| 21      | 8  | 2    | 8  | 28   | 8  | 56   | 9  | 23   | 9  | 51   | 10 | 18   | 10 | 47   |
| 22      | 8  | 27   | 8  | 55   | 9  | 24   | 9  | 53   | 10 | 22   | 10 | 51   | 11 | 22   |
| 23      | 8  | 53   | 9  | 22   | 9  | 53   | 10 | 23   | 10 | 54   | 11 | 25   | 11 | 57   |
| 24      | 9  | 19   | 9  | 50   | 10 | 22   | 10 | 54   | 11 | 26   | 11 | 59   | 12 | 33   |
| 25      | 9  | 46   | 10 | 18   | 10 | 52   | 11 | 25   | 11 | 59   | 12 | 34   | 13 | 9    |
| 26      | 10 | 13   | 10 | 47   | 11 | 22   | 11 | 57   | 12 | 33   | 13 | 9    | 13 | 46   |
| 27      | 10 | 41   | 11 | 16   | 11 | 53   | 12 | 29   | 13 | 7    | 13 | 45   | 14 | 23   |
| 28      | 11 | 9    | 11 | 46   | 12 | 25   | 13 | 2    | 13 | 42   | 14 | 22   | 15 | 1    |
| 29      | 11 | 38   | 12 | 17   | 12 | 57   | 13 | 36   | 14 | 17   | 14 | 59   | 15 | 40   |
| 30      | 12 | 8    | 12 | 48   | 13 | 30   | 14 | 11   | 14 | 53   | 15 | 37   | 16 | 20   |
| 31      | 12 | 38   | 13 | 20   | 14 | 4    | 14 | 47   | 15 | 31   | 16 | 16   | 17 | 1    |
| 32      | 13 | 9    | 13 | 53   | 14 | 38   | 15 | 23   | 16 | 10   | 16 | 56   | 17 | 43   |
| 33      | 13 | 40   | 14 | 26   | 15 | 13   | 16 | 0    | 16 | 49   | 17 | 37   | 18 | 26   |
| 34      | 14 | 12   | 15 | 0    | 15 | 49   | 16 | 38   | 17 | 29   | 18 | 19   | 19 | 11   |
| 35      | 14 | 46   | 15 | 36   | 16 | 26   | 17 | 17   | 18 | 10   | 19 | 3    | 19 | 57   |

Eleuatio Poli supra circulum positionis.



| gio= | 70 |      | 69 |      | 68 |      | 67 |      | 66 |      | 65 |      | 64 |      | nis. |
|------|----|------|----|------|----|------|----|------|----|------|----|------|----|------|------|
| g    | g  | scr. | g  | scr. | g  | scr. | g  | scr. | g  | scr. | g  | scr. | g  | scr. |      |
| 36   | 15 | 20   | 16 | 13   | 17 | 4    | 17 | 57   | 18 | 53   | 19 | 48   | 20 | 45   |      |
| 37   | 15 | 55   | 16 | 50   | 17 | 43   | 18 | 39   | 19 | 37   | 20 | 35   | 21 | 34   |      |
| 38   | 16 | 31   | 17 | 28   | 18 | 24   | 19 | 22   | 20 | 22   | 21 | 23   | 22 | 24   |      |
| 39   | 17 | 9    | 18 | 8    | 19 | 6    | 20 | 6    | 21 | 8    | 22 | 12   | 23 | 16   |      |
| 40   | 17 | 47   | 18 | 49   | 19 | 49   | 20 | 52   | 21 | 56   | 23 | 3    | 24 | 10   |      |
| 41   | 18 | 27   | 19 | 31   | 20 | 34   | 21 | 39   | 22 | 46   | 23 | 56   | 25 | 6    |      |
| 42   | 19 | 8    | 20 | 14   | 21 | 20   | 22 | 28   | 23 | 38   | 24 | 51   | 26 | 4    |      |
| 43   | 19 | 51   | 20 | 59   | 22 | 8    | 23 | 19   | 24 | 32   | 25 | 48   | 27 | 4    |      |
| 44   | 20 | 35   | 21 | 46   | 22 | 58   | 24 | 12   | 25 | 28   | 26 | 47   | 28 | 7    |      |
| 45   | 21 | 21   | 22 | 35   | 23 | 50   | 25 | 7    | 26 | 27   | 27 | 49   | 29 | 12   |      |
| 46   | 22 | 9    | 23 | 26   | 24 | 44   | 26 | 5    | 27 | 28   | 28 | 54   | 30 | 20   |      |
| 47   | 22 | 59   | 24 | 19   | 25 | 41   | 27 | 5    | 28 | 32   | 30 | 1    | 31 | 32   |      |
| 48   | 23 | 51   | 25 | 14   | 26 | 40   | 28 | 8    | 29 | 39   | 31 | 11   | 32 | 48   |      |
| 49   | 24 | 46   | 26 | 12   | 27 | 42   | 29 | 14   | 30 | 49   | 32 | 25   | 34 | 8    |      |
| 50   | 25 | 43   | 27 | 13   | 28 | 47   | 30 | 24   | 32 | 3    | 33 | 44   | 35 | 32   |      |
| 51   | 26 | 43   | 28 | 18   | 29 | 56   | 31 | 38   | 33 | 21   | 35 | 9    | 37 | 2    |      |
| 52   | 27 | 46   | 29 | 26   | 31 | 9    | 32 | 56   | 34 | 44   | 36 | 39   | 38 | 38   |      |
| 53   | 28 | 53   | 30 | 38   | 32 | 26   | 34 | 18   | 36 | 13   | 38 | 15   | 40 | 21   |      |
| 54   | 30 | 4    | 31 | 54   | 33 | 48   | 35 | 45   | 37 | 48   | 39 | 57   | 42 | 11   |      |
| 55   | 31 | 19   | 33 | 15   | 35 | 15   | 37 | 18   | 39 | 30   | 41 | 46   | 44 | 10   |      |
| 56   | 32 | 39   | 34 | 42   | 36 | 48   | 38 | 58   | 41 | 20   | 43 | 44   | 46 | 19   |      |
| 57   | 34 | 5    | 36 | 15   | 38 | 28   | 40 | 47   | 43 | 19   | 45 | 53   | 48 | 41   |      |
| 58   | 35 | 37   | 37 | 55   | 40 | 17   | 42 | 46   | 45 | 28   | 48 | 15   | 51 | 18   |      |
| 59   | 37 | 17   | 38 | 43   | 42 | 16   | 44 | 57   | 47 | 49   | 50 | 53   | 54 | 16   |      |
| 60   | 39 | 5    | 41 | 40   | 44 | 26   | 47 | 20   | 50 | 27   | 53 | 52   | 57 | 39   |      |
| 61   | 41 | 3    | 43 | 50   | 46 | 48   | 49 | 59   | 53 | 27   | 57 | 16   | 61 | 38   |      |
| 62   | 43 | 12   | 46 | 13   | 49 | 27   | 52 | 58   | 56 | 53   | 61 | 17   | 66 | 33   |      |
| 63   | 45 | 35   | 48 | 53   | 52 | 28   | 56 | 25   | 60 | 55   | 66 | 14   | 73 | 11   |      |
| 64   | 48 | 16   | 51 | 55   | 55 | 56   | 60 | 30   | 65 | 54   | 72 | 57   | 90 | 0    |      |
| 65   | 51 | 19   | 55 | 24   | 60 | 3    | 65 | 33   | 72 | 42   | 90 | 0    |    |      |      |
| 66   | 54 | 50   | 59 | 34   | 65 | 9    | 72 | 26   | 90 | 0    |    |      |    |      |      |
| 67   | 59 | 2    | 64 | 44   | 72 | 9    | 90 | 0    |    |      |    |      |    |      |      |
| 68   | 64 | 16   | 71 | 49   | 90 | 0    |    |      |    |      |    |      |    |      |      |
| 69   | 71 | 28   | 90 | 0    |    |      |    |      |    |      |    |      |    |      |      |
| 70   | 90 | 0    |    |      |    |      |    |      |    |      |    |      |    |      |      |



# C A N O N   P O S I T I O N V M

Elevatio Poli supra circulum positionis.

| Laticu. | 63       | 62       | 61       | 60       | 59       | 58       | 57       |
|---------|----------|----------|----------|----------|----------|----------|----------|
| ̄       | ̄   scr. | ̄   scr. | ̄   scr. | ̄   scr. | ̄   scr. | ̄   scr. | ̄   scr. |
| 1       | 0   31   | 0   32   | 0   33   | 0   35   | 0   36   | 0   37   | 0   39   |
| 2       | 1   1    | 1   4    | 1   6    | 1   9    | 1   12   | 1   15   | 1   18   |
| 3       | 1   32   | 1   36   | 1   40   | 1   44   | 1   48   | 1   53   | 1   57   |
| 4       | 2   2    | 2   8    | 2   13   | 2   19   | 2   24   | 2   30   | 2   36   |
| 5       | 2   33   | 2   40   | 2   47   | 2   54   | 3   1    | 3   8    | 3   15   |
| 6       | 3   4    | 3   12   | 3   21   | 3   29   | 3   37   | 3   46   | 3   55   |
| 7       | 3   35   | 3   45   | 3   55   | 4   4    | 4   14   | 4   24   | 4   34   |
| 8       | 4   6    | 4   17   | 4   29   | 4   39   | 4   51   | 5   2    | 5   14   |
| 9       | 4   38   | 4   50   | 5   3    | 5   15   | 5   28   | 5   41   | 5   54   |
| 10      | 5   9    | 5   23   | 5   37   | 5   51   | 6   5    | 6   20   | 6   35   |
| 11      | 5   41   | 5   56   | 6   12   | 6   27   | 6   42   | 6   59   | 7   15   |
| 12      | 6   13   | 6   30   | 6   46   | 7   3    | 7   20   | 7   38   | 7   56   |
| 13      | 6   45   | 7   3    | 7   21   | 7   40   | 7   58   | 8   18   | 8   37   |
| 14      | 7   18   | 7   37   | 7   56   | 8   17   | 8   37   | 8   58   | 9   19   |
| 15      | 7   51   | 8   11   | 8   32   | 8   54   | 9   16   | 9   38   | 10   1   |
| 16      | 8   24   | 8   46   | 9   8    | 9   32   | 9   55   | 10   19  | 10   44  |
| 17      | 8   58   | 9   21   | 9   45   | 10   10  | 10   35  | 11   1   | 11   27  |
| 18      | 9   32   | 9   57   | 10   22  | 10   49  | 11   16  | 11   43  | 12   11  |
| 19      | 10   6   | 10   33  | 11   0   | 11   28  | 11   57  | 12   25  | 12   55  |
| 20      | 10   41  | 11   10  | 11   38  | 12   8   | 12   38  | 13   9   | 13   40  |
| 21      | 11   16  | 11   47  | 12   17  | 12   48  | 13   20  | 13   53  | 14   26  |
| 22      | 11   52  | 12   25  | 12   57  | 13   29  | 14   3   | 14   37  | 15   13  |
| 23      | 12   29  | 13   3   | 13   37  | 14   11  | 14   47  | 15   23  | 16   0   |
| 24      | 13   7   | 13   42  | 14   18  | 14   54  | 15   31  | 16   9   | 16   48  |
| 25      | 13   45  | 14   21  | 14   59  | 15   37  | 16   16  | 16   56  | 17   38  |
| 26      | 14   24  | 15   1   | 15   41  | 16   21  | 17   2   | 17   45  | 18   28  |
| 27      | 15   4   | 15   42  | 16   24  | 17   6   | 17   50  | 18   34  | 19   19  |
| 28      | 15   44  | 16   24  | 17   8   | 17   53  | 18   38  | 19   24  | 20   12  |
| 29      | 16   25  | 17   8   | 17   53  | 18   40  | 19   27  | 20   16  | 21   6   |
| 30      | 17   7   | 17   53  | 18   39  | 19   28  | 20   18  | 21   9   | 22   1   |
| 31      | 17   50  | 18   38  | 19   27  | 20   18  | 21   10  | 22   3   | 22   58  |
| 32      | 18   34  | 19   24  | 20   16  | 21   9   | 22   3   | 22   59  | 23   57  |



nis.

| gio= | 63 | 62   | 61 | 60   | 59 | 58   | 57 |      |    |      |    |      |    |      |
|------|----|------|----|------|----|------|----|------|----|------|----|------|----|------|
| g    | g  | scr. | g  | scr. | g  | scr. | g  | scr. | g  | scr. | g  | scr. | g  | scr. |
| 33   | 19 | 19   | 20 | 12   | 21 | 6    | 22 | 1    | 22 | 58   | 23 | 56   | 24 | 57   |
| 34   | 20 | 6    | 21 | 1    | 21 | 57   | 22 | 55   | 23 | 55   | 24 | 56   | 25 | 59   |
| 35   | 20 | 54   | 21 | 51   | 22 | 50   | 23 | 51   | 24 | 53   | 25 | 57   | 27 | 3    |
| 36   | 21 | 44   | 22 | 43   | 23 | 45   | 24 | 48   | 25 | 5    | 27 | 0    | 28 | 9    |
| 37   | 22 | 35   | 23 | 37   | 24 | 42   | 25 | 47   | 26 | 55   | 28 | 5    | 29 | 18   |
| 38   | 23 | 28   | 24 | 33   | 25 | 40   | 26 | 49   | 28 | 0    | 29 | 12   | 30 | 29   |
| 39   | 24 | 23   | 25 | 31   | 26 | 40   | 27 | 52   | 29 | 7    | 30 | 24   | 31 | 44   |
| 40   | 25 | 20   | 26 | 31   | 27 | 43   | 28 | 59   | 30 | 17   | 31 | 37   | 33 | 1    |
| 41   | 26 | 19   | 27 | 33   | 28 | 48   | 30 | 8    | 31 | 29   | 32 | 54   | 34 | 22   |
| 42   | 27 | 20   | 28 | 37   | 29 | 56   | 31 | 19   | 32 | 45   | 34 | 14   | 35 | 47   |
| 43   | 28 | 23   | 29 | 44   | 31 | 7    | 32 | 34   | 34 | 5    | 35 | 39   | 37 | 16   |
| 44   | 29 | 29   | 30 | 54   | 32 | 21   | 33 | 53   | 35 | 28   | 37 | 7    | 38 | 50   |
| 45   | 30 | 38   | 32 | 7    | 33 | 39   | 35 | 16   | 36 | 56   | 38 | 40   | 40 | 30   |
| 46   | 31 | 51   | 33 | 24   | 35 | 1    | 36 | 43   | 38 | 29   | 40 | 19   | 42 | 15   |
| 47   | 33 | 7    | 34 | 46   | 36 | 28   | 38 | 15   | 40 | 7    | 42 | 4    | 44 | 8    |
| 48   | 34 | 27   | 36 | 12   | 38 | 0    | 39 | 53   | 41 | 52   | 43 | 57   | 46 | 9    |
| 49   | 35 | 52   | 37 | 43   | 39 | 38   | 41 | 37   | 43 | 44   | 45 | 58   | 48 | 20   |
| 50   | 37 | 23   | 39 | 19   | 41 | 22   | 43 | 29   | 45 | 44   | 48 | 8    | 50 | 42   |
| 51   | 39 | 0    | 41 | 2    | 43 | 13   | 45 | 29   | 47 | 54   | 50 | 30   | 53 | 19   |
| 52   | 40 | 43   | 42 | 53   | 45 | 12   | 47 | 39   | 50 | 16   | 53 | 7    | 56 | 13   |
| 53   | 42 | 33   | 44 | 53   | 47 | 21   | 50 | 1    | 52 | 53   | 56 | 1    | 69 | 31   |
| 54   | 44 | 32   | 47 | 3    | 49 | 43   | 52 | 37   | 55 | 48   | 59 | 19   | 63 | 22   |
| 55   | 46 | 42   | 49 | 25   | 52 | 20   | 55 | 32   | 59 | 6    | 63 | 10   | 68 | 2    |
| 56   | 49 | 4    | 52 | 2    | 55 | 15   | 58 | 52   | 62 | 58   | 67 | 53   | 74 | 19   |
| 57   | 51 | 41   | 54 | 58   | 58 | 37   | 62 | 45   | 67 | 42   | 74 | 12   | 90 | 0    |
| 58   | 54 | 37   | 58 | 21   | 62 | 31   | 67 | 31   | 74 | 4    | 90 | 0    |    |      |
| 59   | 58 | 1    | 62 | 15   | 67 | 18   | 73 | 55   | 90 | 0    |    |      |    |      |
| 60   | 61 | 57   | 67 | 4    | 73 | 46   | 90 | 0    |    |      |    |      |    |      |
| 61   | 66 | 50   | 73 | 35   | 90 | 0    |    |      |    |      |    |      |    |      |
| 62   | 73 | 24   | 90 | 0    |    |      |    |      |    |      |    |      |    |      |
| 63   | 90 | 0    |    |      |    |      |    |      |    |      |    |      |    |      |



# CANON POSITIONVM

Elevatio Poli supra circulum positionis,

| Latitu. | 56 | 55   | 54 | 53   | 52 | 51   | 50 |      |    |      |    |      |    |    |
|---------|----|------|----|------|----|------|----|------|----|------|----|------|----|----|
| g       | g  | scr. | g  | scr. | g  | scr. | g  | scr. | g  | scr. | g  | scr. |    |    |
| 1       | 0  | 40   | 0  | 42   | 0  | 44   | 0  | 45   | 0  | 47   | 0  | 49   | 0  | 50 |
| 2       | 1  | 21   | 1  | 24   | 1  | 27   | 1  | 30   | 1  | 34   | 1  | 37   | 1  | 41 |
| 3       | 2  | 2    | 2  | 6    | 2  | 11   | 2  | 16   | 2  | 21   | 2  | 26   | 2  | 31 |
| 4       | 2  | 42   | 2  | 48   | 2  | 55   | 3  | 1    | 3  | 8    | 3  | 15   | 3  | 22 |
| 5       | 3  | 23   | 3  | 31   | 3  | 39   | 3  | 47   | 3  | 55   | 4  | 4    | 4  | 13 |
| 6       | 4  | 4    | 4  | 13   | 4  | 23   | 4  | 33   | 4  | 43   | 4  | 53   | 5  | 4  |
| 7       | 4  | 45   | 4  | 56   | 5  | 7    | 5  | 19   | 5  | 30   | 5  | 42   | 5  | 55 |
| 8       | 5  | 26   | 5  | 39   | 5  | 52   | 6  | 5    | 6  | 18   | 6  | 31   | 6  | 46 |
| 9       | 6  | 8    | 6  | 22   | 6  | 37   | 6  | 51   | 7  | 6    | 7  | 22   | 7  | 38 |
| 10      | 6  | 50   | 7  | 6    | 7  | 22   | 7  | 38   | 7  | 55   | 8  | 13   | 8  | 30 |
| 11      | 7  | 32   | 7  | 49   | 8  | 7    | 8  | 25   | 8  | 44   | 9  | 4    | 9  | 23 |
| 12      | 8  | 15   | 8  | 34   | 8  | 53   | 9  | 13   | 9  | 34   | 9  | 55   | 10 | 16 |
| 13      | 8  | 58   | 9  | 18   | 9  | 39   | 10 | 1    | 10 | 24   | 10 | 47   | 11 | 10 |
| 14      | 9  | 41   | 10 | 3    | 10 | 26   | 10 | 50   | 11 | 14   | 11 | 39   | 12 | 5  |
| 15      | 10 | 25   | 10 | 49   | 11 | 13   | 11 | 39   | 12 | 5    | 12 | 32   | 13 | 0  |
| 16      | 11 | 9    | 11 | 35   | 12 | 1    | 12 | 29   | 12 | 57   | 13 | 26   | 13 | 56 |
| 17      | 11 | 54   | 12 | 22   | 12 | 50   | 13 | 19   | 13 | 49   | 14 | 20   | 14 | 52 |
| 18      | 12 | 40   | 13 | 9    | 13 | 39   | 14 | 10   | 14 | 42   | 15 | 15   | 15 | 49 |
| 19      | 13 | 26   | 13 | 57   | 14 | 29   | 15 | 2    | 15 | 36   | 16 | 11   | 16 | 47 |
| 20      | 14 | 13   | 14 | 46   | 15 | 20   | 15 | 55   | 16 | 31   | 17 | 8    | 17 | 46 |
| 21      | 15 | 1    | 15 | 36   | 16 | 12   | 16 | 49   | 17 | 27   | 18 | 6    | 18 | 47 |
| 22      | 15 | 49   | 16 | 26   | 17 | 5    | 17 | 44   | 18 | 24   | 19 | 5    | 19 | 49 |
| 23      | 16 | 38   | 17 | 17   | 17 | 58   | 18 | 40   | 19 | 22   | 20 | 6    | 20 | 52 |
| 24      | 17 | 29   | 18 | 10   | 18 | 52   | 19 | 37   | 20 | 21   | 21 | 8    | 21 | 56 |
| 25      | 18 | 20   | 19 | 3    | 19 | 48   | 20 | 35   | 21 | 22   | 22 | 11   | 23 | 2  |
| 26      | 19 | 12   | 19 | 58   | 20 | 45   | 21 | 34   | 22 | 24   | 23 | 16   | 24 | 10 |
| 27      | 20 | 6    | 20 | 54   | 21 | 43   | 22 | 35   | 23 | 28   | 24 | 22   | 25 | 19 |
| 28      | 21 | 1    | 21 | 51   | 22 | 43   | 23 | 37   | 24 | 33   | 25 | 30   | 26 | 30 |
| 29      | 21 | 57   | 22 | 50   | 23 | 45   | 24 | 41   | 25 | 40   | 26 | 40   | 27 | 43 |
| 30      | 22 | 55   | 23 | 51   | 24 | 48   | 25 | 47   | 26 | 49   | 27 | 52   | 28 | 59 |



| gior | 56     | 55     | 54     | 53     | 52     | 51     | 50     | nis. |
|------|--------|--------|--------|--------|--------|--------|--------|------|
| g    | g scr. | g scr. | g scr. | g scr. | g scr. | g scr. | g scr. |      |
| 31   | 23 55  | 24 53  | 25 53  | 26 55  | 28 0   | 29 7   | 30 17  |      |
| 32   | 24 56  | 25 57  | 27 0   | 28 5   | 29 13  | 30 34  | 31 37  |      |
| 33   | 25 59  | 27 3   | 28 9   | 29 18  | 30 29  | 31 44  | 33 1   |      |
| 34   | 27 4   | 28 11  | 29 21  | 30 33  | 31 48  | 33 6   | 34 28  |      |
| 35   | 28 11  | 29 22  | 30 35  | 31 51  | 33 10  | 34 33  | 35 59  |      |
| 36   | 29 21  | 30 35  | 31 52  | 33 12  | 34 35  | 36 2   | 37 34  |      |
| 37   | 30 33  | 31 51  | 33 12  | 34 36  | 36 4   | 37 36  | 39 13  |      |
| 38   | 31 48  | 33 10  | 34 35  | 36 4   | 37 37  | 39 15  | 40 58  |      |
| 39   | 33 6   | 34 33  | 36 2   | 37 36  | 39 15  | 40 59  | 42 48  |      |
| 40   | 34 28  | 35 59  | 37 34  | 39 13  | 40 58  | 42 48  | 44 45  |      |
| 41   | 35 54  | 37 30  | 39 10  | 40 55  | 42 47  | 44 45  | 46 50  |      |
| 42   | 37 24  | 39 5   | 40 51  | 42 44  | 44 42  | 46 49  | 49 4   |      |
| 43   | 38 59  | 40 46  | 42 39  | 44 39  | 46 46  | 49 2   | 51 29  |      |
| 44   | 40 39  | 42 33  | 44 33  | 46 42  | 48 59  | 51 27  | 54 8   |      |
| 45   | 42 25  | 44 27  | 46 36  | 48 54  | 51 23  | 54 4   | 57 3   |      |
| 46   | 44 18  | 46 29  | 48 48  | 51 17  | 54 0   | 56 59  | 60 20  |      |
| 47   | 46 20  | 48 40  | 51 11  | 53 55  | 56 55  | 60 16  | 64 8   |      |
| 48   | 48 31  | 51 3   | 53 48  | 56 49  | 60 12  | 64 4   | 68 44  |      |
| 49   | 50 53  | 53 40  | 56 42  | 60 6   | 64 0   | 68 41  | 74 51  |      |
| 50   | 53 30  | 56 34  | 59 59  | 63 54  | 68 37  | 74 49  | 90 0   |      |
| 51   | 56 24  | 59 51  | 63 48  | 68 32  | 74 45  | 90 0   |        |      |
| 52   | 59 42  | 63 40  | 68 25  | 74 42  | 90 0   |        |        |      |
| 53   | 63 31  | 68 19  | 74 37  | 90 0   |        |        |        |      |
| 54   | 68 11  | 74 32  | 90 0   |        |        |        |        |      |
| 55   | 74 26  | 90 0   |        |        |        |        |        |      |
| 56   | 90 0   |        |        |        |        |        |        |      |



# CANON POSITIONVM

| Latitu. | 49     | 48     | 47     | 46     | 45     | 44     | 43     |
|---------|--------|--------|--------|--------|--------|--------|--------|
| ̄       | ̄ scr. | ̄ scr. | ̄ scr. | ̄ scr. | ̄ scr. | ̄ scr. | ̄ scr. |
| 1       | 0 52   | 0 54   | 0 56   | 0 58   | 1 0    | 1 2    | 1 4    |
| 2       | 1 44   | 1 48   | 1 52   | 1 56   | 2 0    | 2 4    | 2 9    |
| 3       | 2 37   | 2 42   | 2 48   | 2 54   | 3 0    | 3 7    | 3 13   |
| 4       | 3 29   | 3 37   | 3 44   | 3 52   | 4 1    | 4 9    | 4 18   |
| 5       | 4 22   | 4 31   | 4 41   | 4 51   | 5 1    | 5 12   | 5 23   |
| 6       | 5 15   | 5 26   | 5 37   | 5 50   | 6 2    | 6 15   | 6 28   |
| 7       | 6 8    | 6 21   | 6 34   | 6 49   | 7 3    | 7 18   | 7 34   |
| 8       | 7 1    | 7 16   | 7 32   | 7 48   | 8 5    | 8 22   | 8 40   |
| 9       | 7 55   | 8 12   | 8 30   | 8 48   | 9 7    | 9 26   | 9 47   |
| 10      | 8 49   | 9 8    | 9 28   | 9 48   | 10 9   | 10 31  | 10 54  |
| 11      | 9 44   | 10 5   | 10 27  | 10 49  | 11 12  | 11 37  | 12 2   |
| 12      | 10 39  | 11 2   | 11 26  | 11 51  | 12 16  | 12 43  | 13 11  |
| 13      | 11 35  | 12 0   | 12 26  | 12 53  | 13 21  | 13 50  | 14 21  |
| 14      | 12 31  | 12 59  | 13 27  | 13 56  | 14 26  | 14 58  | 15 31  |
| 15      | 13 28  | 13 58  | 14 28  | 15 0   | 15 32  | 16 7   | 16 42  |
| 16      | 14 26  | 14 58  | 15 31  | 16 5   | 16 39  | 17 17  | 17 64  |
| 17      | 15 25  | 15 59  | 16 34  | 17 11  | 17 48  | 18 28  | 19 8   |
| 18      | 16 25  | 17 1   | 17 38  | 18 18  | 18 58  | 19 40  | 20 23  |
| 19      | 17 25  | 18 4   | 18 44  | 19 26  | 20 9   | 20 53  | 21 40  |
| 20      | 18 27  | 19 8   | 19 50  | 20 35  | 21 21  | 22 8   | 22 58  |
| 21      | 19 30  | 20 13  | 20 59  | 21 46  | 22 34  | 23 25  | 24 18  |
| 22      | 20 34  | 21 20  | 22 8   | 22 58  | 23 50  | 24 44  | 25 40  |
| 23      | 21 39  | 22 28  | 23 19  | 24 12  | 25 7   | 26 5   | 27 4   |
| 24      | 22 46  | 23 38  | 24 32  | 25 28  | 26 26  | 27 27  | 28 31  |
| 25      | 23 55  | 24 50  | 25 47  | 26 46  | 28 47  | 28 52  | 30 0   |
| 26      | 25 5   | 26 3   | 27 4   | 28 6   | 29 11  | 30 20  | 31 32  |
| 27      | 26 17  | 27 18  | 28 23  | 29 29  | 30 38  | 31 51  | 33 7   |
| 28      | 27 32  | 28 36  | 29 44  | 30 54  | 32 7   | 33 24  | 34 46  |
| 29      | 28 48  | 29 56  | 31 8   | 32 22  | 33 40  | 35 2   | 36 28  |
| 30      | 30 7   | 31 19  | 32 24  | 33 53  | 35 16  | 36 43  | 38 15  |

Elevatio poli supracirculum positionis.



| gio: | 49     | 48     | 47     | 46     | 45     | 44     | 43     | nis. |
|------|--------|--------|--------|--------|--------|--------|--------|------|
| g    | g scr. | g scr. | g scr. | g scr. | g scr. | g scr. | g scr. |      |
| 31   | 31 29  | 32 45  | 34 5   | 35 28  | 36 56  | 38 29  | 40 7   |      |
| 32   | 32 54  | 34 14  | 35 38  | 37 7   | 38 40  | 40 19  | 42 4   |      |
| 33   | 34 22  | 35 41  | 37 16  | 39 50  | 40 30  | 42 15  | 44 8   |      |
| 34   | 35 54  | 37 24  | 38 59  | 40 39  | 42 25  | 44 18  | 46 20  |      |
| 35   | 37 30  | 39 5   | 40 46  | 42 33  | 44 27  | 46 29  | 48 40  |      |
| 36   | 39 10  | 40 51  | 42 39  | 44 33  | 46 36  | 48 48  | 51 11  |      |
| 37   | 40 55  | 42 44  | 44 39  | 46 41  | 48 54  | 51 18  | 53 55  |      |
| 38   | 42 47  | 44 42  | 46 46  | 48 59  | 51 23  | 54 1   | 56 55  |      |
| 39   | 44 45  | 46 49  | 49 2   | 51 28  | 54 4   | 57 0   | 60 16  |      |
| 40   | 46 50  | 49 4   | 51 29  | 54 9   | 57 3   | 60 20  | 64 8   |      |
| 41   | 49 5   | 51 31  | 54 10  | 57 5   | 60 23  | 64 11  | 68 47  |      |
| 42   | 51 31  | 54 10  | 57 6   | 60 24  | 64 13  | 68 49  | 74 55  |      |
| 43   | 54 10  | 57 6   | 60 25  | 64 14  | 68 50  | 74 56  | 90 0   |      |
| 44   | 57 5   | 60 24  | 64 14  | 68 51  | 74 57  | 90 0   |        |      |
| 45   | 60 23  | 64 13  | 68 50  | 74 57  | 90 0   |        |        |      |
| 46   | 64 11  | 68 48  | 74 56  | 90 0   |        |        |        |      |
| 47   | 68 47  | 74 55  | 90 0   |        |        |        |        |      |
| 48   | 74 54  | 90 0   |        |        |        |        |        |      |
| 49   | 90 0   |        |        |        |        |        |        |      |



# CANON POSITIONVM

| Latitu. | 42     | 41     | 40     | 39     | 38     | 37     | 36     |
|---------|--------|--------|--------|--------|--------|--------|--------|
| ̄       | ̄ scr. | ̄ scr. | ̄ scr. | ̄ scr. | ̄ scr. | ̄ scr. | ̄ scr. |
| 1       | 1 7    | 1 9    | 1 12   | 1 14   | 1 17   | 1 20   | 1 23   |
| 2       | 2 13   | 2 18   | 2 23   | 2 28   | 2 34   | 2 39   | 2 45   |
| 3       | 3 20   | 3 27   | 3 35   | 3 43   | 3 51   | 3 59   | 4 8    |
| 4       | 4 27   | 4 37   | 4 47   | 4 57   | 5 8    | 5 19   | 5 31   |
| 5       | 5 35   | 5 47   | 5 59   | 6 12   | 6 26   | 6 40   | 6 55   |
| 6       | 6 42   | 6 57   | 7 12   | 7 27   | 7 44   | 8 1    | 8 19   |
| 7       | 7 50   | 8 7    | 8 25   | 8 43   | 9 3    | 9 23   | 9 44   |
| 8       | 8 59   | 9 18   | 9 38   | 10 0   | 10 22  | 10 45  | 11 9   |
| 9       | 10 8   | 10 30  | 10 53  | 11 17  | 11 42  | 12 8   | 12 35  |
| 10      | 11 18  | 11 42  | 12 8   | 12 35  | 13 3   | 13 32  | 14 2   |
| 11      | 12 28  | 12 55  | 13 24  | 13 53  | 14 25  | 14 57  | 15 31  |
| 12      | 13 39  | 14 9   | 14 40  | 15 13  | 15 48  | 16 23  | 17 1   |
| 13      | 14 51  | 15 24  | 15 58  | 16 34  | 17 12  | 17 50  | 18 32  |
| 14      | 16 5   | 16 40  | 17 17  | 17 56  | 18 37  | 19 19  | 20 4   |
| 15      | 17 19  | 17 57  | 18 37  | 19 19  | 20 3   | 20 50  | 21 38  |
| 16      | 18 34  | 19 16  | 19 59  | 20 44  | 21 32  | 22 22  | 23 14  |
| 17      | 19 51  | 20 36  | 21 22  | 22 11  | 23 2   | 23 56  | 24 53  |
| 18      | 21 9   | 21 57  | 22 47  | 23 39  | 24 34  | 25 33  | 26 34  |
| 19      | 22 29  | 23 20  | 24 14  | 25 10  | 26 9   | 27 11  | 28 17  |
| 20      | 23 51  | 24 45  | 25 43  | 26 43  | 27 46  | 28 53  | 30 4   |
| 21      | 25 14  | 26 12  | 27 14  | 28 18  | 29 26  | 30 37  | 31 54  |
| 22      | 26 40  | 27 42  | 28 47  | 29 56  | 31 9   | 32 25  | 33 48  |
| 23      | 28 8   | 29 14  | 30 23  | 31 37  | 32 55  | 34 17  | 35 46  |
| 24      | 29 38  | 30 48  | 32 3   | 33 21  | 34 44  | 36 13  | 37 48  |
| 25      | 31 11  | 32 26  | 33 46  | 35 10  | 36 39  | 38 14  | 39 56  |
| 26      | 32 48  | 34 8   | 35 32  | 37 3   | 38 38  | 40 20  | 42 10  |
| 27      | 34 28  | 35 53  | 37 23  | 39 0   | 40 42  | 42 33  | 44 32  |
| 28      | 36 12  | 37 43  | 39 19  | 41 2   | 41 53  | 44 53  | 47 2   |
| 29      | 38 0   | 39 37  | 41 21  | 43 11  | 45 12  | 47 21  | 49 44  |
| 30      | 39 53  | 41 37  | 43 29  | 45 28  | 47 39  | 50 1   | 52 37  |

Elevatio poli supracirculum positionis.



| gio= | 42 | 41   | 40 | 39   | 38 | 37   | 36 | nis. |    |      |    |      |    |    |
|------|----|------|----|------|----|------|----|------|----|------|----|------|----|----|
| g    | g  | scr. | g  | scr. | g  | scr. | g  | scr. | g  | scr. | g  | scr. |    |    |
| 31   | 41 | 52   | 43 | 43   | 45 | 44   | 47 | 54   | 50 | 16   | 52 | 53   | 55 | 48 |
| 32   | 43 | 57   | 45 | 57   | 48 | 8    | 50 | 30   | 53 | 7    | 56 | 1    | 59 | 19 |
| 33   | 46 | 9    | 48 | 20   | 50 | 43   | 53 | 19   | 56 | 13   | 59 | 31   | 63 | 22 |
| 34   | 48 | 31   | 50 | 53   | 53 | 30   | 56 | 24   | 59 | 42   | 63 | 31   | 68 | 11 |
| 35   | 51 | 3    | 53 | 40   | 56 | 34   | 59 | 51   | 63 | 40   | 68 | 19   | 74 | 32 |
| 36   | 53 | 48   | 56 | 42   | 59 | 59   | 63 | 48   | 68 | 25   | 74 | 37   | 90 | 0  |
| 37   | 56 | 49   | 60 | 6    | 63 | 54   | 68 | 32   | 74 | 41   | 90 | 0    |    |    |
| 38   | 60 | 12   | 64 | 0    | 68 | 37   | 74 | 45   | 90 | 0    |    |      |    |    |
| 39   | 64 | 4    | 68 | 41   | 74 | 49   | 90 | 0    |    |      |    |      |    |    |
| 40   | 68 | 44   | 74 | 51   | 90 | 0    |    |      |    |      |    |      |    |    |
| 41   | 74 | 54   | 90 | 0    |    |      |    |      |    |      |    |      |    |    |
| 42   | 90 | 0    |    |      |    |      |    |      |    |      |    |      |    |    |



CANON POSITIONVM GENERALIS.

| Latitu. | 35 | 34   | 33 | 32   | 31 | 30   | regionis |      |
|---------|----|------|----|------|----|------|----------|------|
| g       | g  | scr. | g  | scr. | g  | scr. | g        | scr. |
| 1       | 1  | 26   | 1  | 29   | 1  | 33   | 1        | 40   |
| 2       | 2  | 51   | 2  | 58   | 3  | 5    | 3        | 12   |
| 3       | 4  | 17   | 4  | 27   | 4  | 38   | 5        | 0    |
| 4       | 5  | 44   | 5  | 57   | 6  | 11   | 6        | 41   |
| 5       | 7  | 11   | 7  | 27   | 7  | 44   | 8        | 22   |
| 6       | 8  | 38   | 8  | 58   | 9  | 18   | 9        | 41   |
| 7       | 10 | 6    | 10 | 29   | 10 | 53   | 11       | 20   |
| 8       | 11 | 35   | 12 | 1    | 12 | 29   | 13       | 0    |
| 9       | 13 | 4    | 13 | 34   | 14 | 7    | 14       | 41   |
| 10      | 14 | 35   | 15 | 9    | 15 | 46   | 16       | 23   |
| 11      | 16 | 7    | 16 | 45   | 17 | 26   | 18       | 7    |
| 12      | 17 | 40   | 18 | 22   | 19 | 7    | 19       | 53   |
| 13      | 19 | 15   | 20 | 1    | 20 | 50   | 21       | 41   |
| 14      | 20 | 52   | 21 | 42   | 22 | 35   | 23       | 31   |
| 15      | 22 | 30   | 23 | 25   | 24 | 22   | 25       | 24   |
| 16      | 24 | 10   | 25 | 10   | 26 | 12   | 27       | 20   |
| 17      | 25 | 53   | 26 | 58   | 28 | 5    | 29       | 19   |
| 18      | 27 | 39   | 28 | 49   | 30 | 1    | 31       | 21   |
| 19      | 29 | 28   | 30 | 43   | 32 | 1    | 33       | 27   |
| 20      | 31 | 20   | 32 | 40   | 34 | 5    | 35       | 38   |
| 21      | 33 | 15   | 34 | 41   | 36 | 14   | 37       | 54   |
| 22      | 35 | 14   | 36 | 48   | 38 | 28   | 40       | 17   |
| 23      | 37 | 19   | 39 | 0    | 40 | 48   | 42       | 47   |
| 24      | 39 | 29   | 41 | 18   | 43 | 16   | 44       | 26   |
| 25      | 41 | 45   | 43 | 44   | 45 | 54   | 48       | 16   |
| 26      | 44 | 9    | 46 | 19   | 48 | 42   | 51       | 19   |
| 27      | 46 | 41   | 49 | 4    | 51 | 42   | 54       | 38   |
| 28      | 49 | 24   | 52 | 2    | 54 | 58   | 58       | 19   |
| 29      | 52 | 20   | 55 | 16   | 58 | 36   | 62       | 31   |
| 30      | 55 | 32   | 58 | 52   | 62 | 45   | 67       | 31   |
| 31      | 59 | 6    | 62 | 59   | 67 | 42   | 74       | 4    |
| 32      | 63 | 10   | 67 | 53   | 74 | 12   | 90       | 0    |
| 33      | 68 | 2    | 74 | 19   | 90 | 0    |          |      |
| 34      | 74 | 26   | 90 | 0    |    |      |          |      |
| 35      | 90 | 0    |    |      |    |      |          |      |

Elevatio poli supra circulum positionis,



CANON SIN V=

VM VEL SEMISSIVM

Rectarum in circulo Subten-  
farum.

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f 2



# CANON SIN VVM VEL SEMISSIVM

|    | 0     |      | I      |      | 2      |      | 3      |      | 4      |         |
|----|-------|------|--------|------|--------|------|--------|------|--------|---------|
| 0  | 0000  |      | 174524 |      | 348995 |      | 523360 |      | 697565 | 60      |
| 1  | 2909  | 2909 | 177433 | 2908 | 351902 | 2907 | 526265 | 2905 | 700467 | 59      |
| 2  | 5818  |      | 180341 |      | 354809 |      | 529170 |      | 703369 | 58      |
| 3  | 8727  |      | 183250 |      | 357716 |      | 532075 |      | 706270 | 57      |
| 4  | 11636 |      | 186158 |      | 360623 |      | 534980 |      | 709172 | 56      |
| 5  | 14544 |      | 189066 |      | 363530 |      | 537884 |      | 712073 | 55      |
| 6  | 17453 |      | 191975 |      | 366437 |      | 540789 |      | 714975 | 54      |
| 7  | 20362 |      | 194883 |      | 369344 |      | 543694 |      | 717876 | 2901 53 |
| 8  | 23271 |      | 197792 |      | 372251 |      | 546598 |      | 720777 | 52      |
| 9  | 26180 |      | 200700 |      | 375158 |      | 549503 | 2904 | 723678 | 51      |
| 10 | 29088 |      | 203608 |      | 378064 |      | 552407 |      | 726579 | 50      |
| 11 | 31997 |      | 206517 |      | 380971 |      | 555312 |      | 729480 | 49      |
| 12 | 34906 |      | 209425 |      | 383878 |      | 558216 |      | 732381 | 48      |
| 13 | 37815 |      | 212333 |      | 386785 |      | 561120 |      | 735282 | 47      |
| 14 | 40724 |      | 215241 |      | 389692 |      | 564024 |      | 738183 | 46      |
| 15 | 43632 |      | 218149 |      | 392598 |      | 566928 |      | 741084 | 45      |
| 16 | 46541 |      | 221057 |      | 395505 |      | 569832 |      | 743985 | 44      |
| 17 | 49450 |      | 223965 |      | 393412 |      | 572736 |      | 746886 | 43      |
| 18 | 52359 |      | 226873 |      | 401318 |      | 575640 |      | 749787 | 42      |
| 19 | 55268 |      | 229781 |      | 404225 |      | 578544 |      | 752688 | 2900 41 |
| 20 | 58177 |      | 232689 |      | 407131 |      | 581448 |      | 755588 | 40      |
| 21 | 61086 |      | 235597 |      | 410038 |      | 584352 |      | 758489 | 39      |
| 22 | 63995 |      | 238505 |      | 412944 |      | 587256 |      | 761389 | 38      |
| 23 | 66904 |      | 241413 |      | 415851 |      | 590160 |      | 764290 | 37      |
| 24 | 69813 |      | 244321 |      | 418757 |      | 593064 |      | 767190 | 36      |
| 25 | 72721 |      | 247229 |      | 421663 |      | 595967 |      | 770090 | 35      |
| 26 | 75630 |      | 250137 |      | 424570 |      | 598871 |      | 772991 | 34      |
| 27 | 78539 |      | 253045 |      | 427476 |      | 601775 |      | 775891 | 33      |
| 28 | 81448 |      | 255953 |      | 430382 |      | 604678 |      | 778791 | 32      |
| 29 | 84357 |      | 258861 |      | 433288 |      | 607582 |      | 781691 | 31      |
| 30 | 87265 |      | 261769 |      | 436194 |      | 610485 |      | 784591 | 30      |
|    | 89    |      | 88     |      | 87     |      | 86     |      | 85     |         |



# RECTARVM IN CIRCULO SVBTENSARVM 115

|    | O      |      | I      |      | 2      |      | 3      |      | 4      |         |
|----|--------|------|--------|------|--------|------|--------|------|--------|---------|
| 1  | 90174  | 2909 | 264677 | 2908 | 439100 | 2906 | 613389 |      | 787491 | 29      |
| 2  | 93083  |      | 267585 |      | 442006 |      | 616292 |      | 790391 | 28      |
| 3  | 95992  |      | 270493 |      | 444912 |      | 619196 |      | 793291 | 27      |
| 4  | 98901  |      | 273401 |      | 447818 |      | 622099 | 2903 | 796191 | 26      |
| 5  | 101809 |      | 276308 |      | 450724 |      | 625002 |      | 799090 | 25      |
| 6  | 104718 |      | 279216 |      | 453630 |      | 627905 |      | 801990 | 24      |
| 7  | 107627 |      | 282124 |      | 456536 |      | 630808 |      | 804889 | 23      |
| 8  | 110536 |      | 285032 |      | 459442 |      | 633711 |      | 807789 | 22      |
| 9  | 113445 |      | 287940 |      | 462348 |      | 636614 |      | 810688 | 21      |
| 10 | 116353 |      | 290847 |      | 465253 |      | 639517 |      | 813587 | 20      |
| 11 | 119262 |      | 293755 |      | 468159 |      | 642420 |      | 816486 | 2899 19 |
| 12 | 122171 |      | 296663 |      | 471065 |      | 645323 |      | 819385 | 18      |
| 13 | 125079 |      | 299570 |      | 473970 |      | 648226 |      | 822284 | 17      |
| 14 | 127988 |      | 302478 |      | 476876 |      | 651129 |      | 825183 | 16      |
| 15 | 130896 |      | 305385 |      | 479781 |      | 654031 |      | 828082 | 15      |
| 16 | 133805 |      | 308293 |      | 482687 |      | 656934 |      | 830981 | 14      |
| 17 | 136714 |      | 311200 |      | 485592 |      | 659837 |      | 833880 | 13      |
| 18 | 139622 |      | 314108 |      | 488498 |      | 662739 |      | 836778 | 12      |
| 19 | 142531 |      | 317015 |      | 491403 |      | 665642 |      | 839677 | 11      |
| 20 | 145439 |      | 319922 |      | 494308 |      | 668544 |      | 842575 | 10      |
| 21 | 148348 |      | 322830 | 2907 | 497214 |      | 671447 |      | 845474 | 9       |
| 22 | 151257 |      | 325737 |      | 500119 |      | 674349 |      | 848372 | 8       |
| 23 | 154165 |      | 328645 |      | 503024 |      | 677251 | 2902 | 851271 | 7       |
| 24 | 157074 |      | 331552 |      | 505929 |      | 680153 |      | 854169 | 2898 6  |
| 25 | 159982 |      | 334459 |      | 508834 |      | 683055 |      | 857067 | 5       |
| 26 | 162891 | 2908 | 337367 |      | 511740 |      | 685957 |      | 859965 | 4       |
| 27 | 165799 |      | 340274 |      | 514645 | 2905 | 688859 |      | 862863 | 3       |
| 28 | 168708 |      | 343181 |      | 517550 |      | 691761 |      | 865761 | 2       |
| 29 | 171616 |      | 346088 |      | 520455 |      | 694663 |      | 868659 | 1       |
| 30 | 174524 |      | 348995 |      | 523360 |      | 697565 |      | 871557 | 0       |
|    | 89     |      | 88     |      | 87     |      | 86     |      | 85     |         |



# CANON SINVVM VEL SEMISSIVM

|    | 5      |      | 6       |      | 7       |      | 8       |      | 9       |    |
|----|--------|------|---------|------|---------|------|---------|------|---------|----|
| 0  | 871527 |      | 1045285 |      | 1218693 |      | 1391731 |      | 1564345 | 60 |
| 1  | 874455 |      | 1048178 |      | 1221580 | 2887 | 1394612 |      | 1567213 | 59 |
| 2  | 877353 |      | 1051071 |      | 1224467 |      | 1397492 |      | 1570091 | 58 |
| 3  | 880250 |      | 1053964 |      | 1227354 |      | 1400373 |      | 1572964 | 57 |
| 4  | 883148 |      | 1056857 |      | 1230241 |      | 1403253 |      | 1575837 | 56 |
| 5  | 886045 |      | 1059749 |      | 1233128 |      | 1406133 |      | 1578709 | 55 |
| 6  | 888943 |      | 1062642 | 2892 | 1236015 |      | 1409013 |      | 1581581 | 54 |
| 7  | 891840 |      | 1065534 |      | 1238902 |      | 1411893 |      | 1584453 | 53 |
| 8  | 894737 |      | 1068426 |      | 1241788 |      | 1414772 |      | 1587325 | 52 |
| 9  | 897634 | 2897 | 1071318 |      | 1244674 | 2886 | 1417652 |      | 1590197 | 51 |
| 10 | 900531 |      | 1074210 |      | 1247560 |      | 1420531 | 2879 | 1593069 | 50 |
| 11 | 903428 |      | 1077102 |      | 1250446 |      | 1423410 |      | 1595941 | 49 |
| 12 | 906325 |      | 1079994 |      | 1253332 |      | 1426289 |      | 1598812 | 48 |
| 13 | 909222 |      | 1082886 |      | 1256218 |      | 1429168 |      | 1601684 | 47 |
| 14 | 912119 |      | 1085778 |      | 1259104 |      | 1432047 |      | 1604555 | 46 |
| 15 | 915016 |      | 1088669 |      | 1261990 |      | 1434926 |      | 1607426 | 45 |
| 16 | 917913 |      | 1091561 |      | 1264876 |      | 1437805 |      | 1610297 | 44 |
| 17 | 920809 |      | 1094452 |      | 1267761 |      | 1440684 |      | 1613168 | 43 |
| 18 | 923706 | 2896 | 1097344 | 2891 | 1270647 |      | 1443562 |      | 1616038 | 42 |
| 19 | 926602 |      | 1100235 |      | 1273532 | 2885 | 1446441 | 2878 | 1618909 | 41 |
| 20 | 929498 |      | 1103126 |      | 1276417 |      | 1449319 |      | 1621779 | 40 |
| 21 | 932395 |      | 1106017 |      | 1279302 |      | 1452197 |      | 1624649 | 39 |
| 22 | 935291 |      | 1108908 |      | 1282187 |      | 1455075 |      | 1627519 | 38 |
| 23 | 938187 |      | 1111799 |      | 1285072 |      | 1457953 |      | 1630389 | 37 |
| 24 | 941083 |      | 1114690 | 2890 | 1287957 |      | 1460831 |      | 1633259 | 36 |
| 25 | 943979 |      | 1117580 |      | 1290841 |      | 1463708 |      | 1636129 | 35 |
| 26 | 946875 |      | 1120471 |      | 1293726 |      | 1466586 | 2877 | 1638999 | 34 |
| 27 | 949771 |      | 1123361 |      | 1296610 | 2884 | 1469463 |      | 1641868 | 33 |
| 28 | 952667 |      | 1126252 |      | 1299494 |      | 1472340 |      | 1644738 | 32 |
| 29 | 955563 |      | 1129142 |      | 1302378 |      | 1475217 |      | 1647607 | 31 |
| 30 | 958458 |      | 1132032 |      | 1105262 |      | 1478094 |      | 1650476 | 30 |
|    | 2869   |      |         |      |         |      |         |      |         |    |
|    | 84     |      | 83      |      | 82      |      | 81      |      | 80      |    |



# RECTARVM IN CIRCULO SVBTENSARVM 116

|    | 5       |      | 6       |      | 7       |      | 8       |      | 9       |      |
|----|---------|------|---------|------|---------|------|---------|------|---------|------|
| 31 | 961354  | 2895 | 1134922 |      | 1308146 |      | 1480971 |      | 1653345 | 29   |
| 32 | 964249  |      | 1137812 |      | 1311030 |      | 1483848 |      | 1656214 | 28   |
| 33 | 967144  |      | 1140702 |      | 1313914 |      | 1486724 |      | 1659082 | 27   |
| 34 | 970039  |      | 1143592 |      | 1316798 |      | 1489601 | 2876 | 1661951 | 26   |
| 35 | 972934  |      | 1146482 |      | 1319681 | 2883 | 1492477 |      | 1664819 | 25   |
| 36 | 975829  |      | 1149372 |      | 1322564 |      | 1495353 |      | 1667687 | 24   |
| 37 | 978724  |      | 1152261 |      | 1325447 |      | 1498229 |      | 1670555 | 23   |
| 38 | 981619  |      | 1155151 |      | 1328330 |      | 1501105 |      | 1673423 | 22   |
| 39 | 984514  |      | 1158040 |      | 1331213 |      | 1503981 |      | 1676291 | 21   |
| 40 | 987408  |      | 1160929 | 2889 | 1334096 |      | 1506857 |      | 1679159 | 20   |
| 41 | 990303  |      | 1163818 |      | 1336979 |      | 1509733 |      | 1682027 | 19   |
| 42 | 993198  |      | 1166707 |      | 1339862 |      | 1512608 |      | 1684894 | 18   |
| 43 | 996092  |      | 1169596 |      | 1342744 |      | 1515484 | 2875 | 1687761 | 17   |
| 44 | 998987  |      | 1172485 |      | 1345627 |      | 1518359 |      | 1690628 | 16   |
| 45 | 1001881 | 2894 | 1175374 |      | 1348509 |      | 1521234 |      | 1693495 | 15   |
| 46 | 1004775 |      | 1178263 |      | 1351392 | 2882 | 1524109 |      | 1696362 | 14   |
| 47 | 1007669 |      | 1181151 |      | 1354274 |      | 1526984 |      | 1699229 | 13   |
| 48 | 1010563 |      | 1184040 |      | 1357156 |      | 1529856 |      | 1702095 | 12   |
| 49 | 1013457 |      | 1186928 | 2888 | 1360038 |      | 1532734 | 2874 | 1704962 | 11   |
| 50 | 1016351 |      | 1189816 |      | 1362920 |      | 1535608 |      | 1707828 | 10   |
| 51 | 1019245 |      | 1192704 |      | 1365802 | 2881 | 1538482 |      | 1710694 | 9    |
| 52 | 1022139 |      | 1195592 |      | 1368683 |      | 1541356 |      | 1713560 | 8    |
| 53 | 1025032 |      | 1198480 |      | 1371564 |      | 1544230 |      | 1716426 | 7    |
| 54 | 1027926 |      | 1201368 |      | 1374446 |      | 1547104 |      | 1719292 | 6    |
| 55 | 1030819 |      | 1204255 |      | 1377327 |      | 1549978 |      | 1722157 | 2865 |
| 56 | 1033713 | 2893 | 1207143 |      | 1380208 |      | 1552852 |      | 1725022 | 4    |
| 57 | 1036606 |      | 1210031 |      | 1383089 |      | 1555725 |      | 1727887 | 3    |
| 58 | 1039499 |      | 1212918 |      | 1385970 |      | 1558599 | 2873 | 1730752 | 2    |
| 59 | 1042392 |      | 1215806 |      | 1388851 | 2880 | 1561472 |      | 1733617 | 1    |
| 60 | 1045285 |      | 1218693 |      | 1391731 |      | 1564345 |      | 1736482 | 0    |
|    | 84      |      | 83      |      | 82      |      | 81      |      | 80      |      |



# CANON SIN VVM VEL SEMISSIVM

|    | IO      |      | II      |      | 12      |      | 13      |      | 14      |    |
|----|---------|------|---------|------|---------|------|---------|------|---------|----|
| 0  | 1736482 |      | 1908090 |      | 2079117 |      | 2249511 |      | 2419219 | 60 |
| 1  | 1739347 | 2864 | 1910945 | 2855 | 2081962 |      | 2252345 |      | 2422041 | 59 |
| 2  | 1742211 |      | 1913800 |      | 2084807 |      | 2255179 |      | 2424863 | 58 |
| 3  | 1745075 |      | 1916655 |      | 2087652 |      | 2258013 |      | 2427685 | 57 |
| 4  | 1747939 |      | 1919510 |      | 2090497 |      | 2260847 | 2833 | 2430507 | 56 |
| 5  | 1750803 |      | 1922365 |      | 2093342 | 2844 | 2263680 |      | 2433329 | 55 |
| 6  | 1753667 |      | 1925220 | 2854 | 2096185 |      | 2266513 |      | 2436150 | 54 |
| 7  | 1756531 | 2863 | 1928074 |      | 2099010 |      | 2269346 |      | 2438971 | 53 |
| 8  | 1759394 |      | 1930928 |      | 2101874 |      | 2272179 |      | 2441792 | 52 |
| 9  | 1762258 |      | 1933782 |      | 2104718 |      | 2275012 | 2832 | 2444613 | 51 |
| 10 | 1765121 |      | 1936636 |      | 2107562 | 2843 | 2277844 |      | 2447434 | 50 |
| 11 | 1767984 |      | 1939490 | 2853 | 2110405 |      | 2280676 |      | 2450254 | 49 |
| 12 | 1770847 |      | 1942344 |      | 2113248 |      | 2283508 |      | 2453074 | 48 |
| 13 | 1773710 |      | 1945197 |      | 2116091 |      | 2286340 |      | 2455894 | 47 |
| 14 | 1776573 |      | 1948050 |      | 2118934 |      | 2289172 | 2831 | 2458714 | 46 |
| 15 | 1779436 |      | 1950903 |      | 2121777 |      | 2292004 |      | 2461533 | 45 |
| 16 | 1782298 | 2862 | 1953756 |      | 2124620 |      | 2294835 |      | 2464352 | 44 |
| 17 | 1785160 |      | 1956609 |      | 2127462 | 2842 | 2297666 |      | 2467177 | 43 |
| 18 | 1788022 |      | 1959462 | 2852 | 2130304 |      | 2300497 |      | 2469990 | 42 |
| 19 | 1790884 |      | 1962314 |      | 2133146 |      | 2303328 |      | 2472809 | 41 |
| 20 | 1793746 |      | 1965166 |      | 2135988 |      | 2306159 | 2830 | 2475628 | 40 |
| 21 | 1796608 |      | 1968018 |      | 2138830 | 2841 | 2308989 |      | 2478446 | 39 |
| 22 | 1799469 |      | 1970870 |      | 2141671 |      | 2311819 |      | 2481264 | 38 |
| 23 | 1802331 | 2861 | 1973722 |      | 2144512 |      | 2314649 |      | 2484082 | 37 |
| 24 | 1805192 |      | 1976574 | 2851 | 2147353 |      | 2317479 |      | 2486900 | 36 |
| 25 | 1808053 |      | 1979425 |      | 2150194 |      | 2320309 |      | 2489717 | 35 |
| 26 | 1810914 | 2860 | 1982276 |      | 2153035 |      | 2323138 | 2829 | 2492534 | 34 |
| 27 | 1813774 |      | 1985127 |      | 2155876 | 2840 | 2325967 |      | 2495351 | 33 |
| 28 | 1816634 |      | 1987978 |      | 2158716 |      | 2328799 |      | 2498168 | 32 |
| 29 | 1819495 |      | 1990829 | 2850 | 2161556 |      | 2331625 |      | 2500984 | 31 |
| 30 | 1822355 |      | 1993679 |      | 2164396 |      | 2334454 | 2828 | 2503800 | 30 |
|    | 79      |      | 78      |      | 77      |      | 76      |      | 75      |    |



# RECTARVM IN CIRCULO SVBTENSARVM. 117

|   | IO      |      | II      |      | I2      |      | I3      |      | I4      |    |
|---|---------|------|---------|------|---------|------|---------|------|---------|----|
| 1 | 1825215 |      | 1996530 |      | 2167236 |      | 2337282 |      | 2506616 | 29 |
| 2 | 1828075 |      | 1999380 |      | 2170076 |      | 2340110 |      | 2509432 | 28 |
| 3 | 1830935 |      | 2002230 |      | 2172916 | 2839 | 2342938 |      | 2512248 | 27 |
| 4 | 1833795 |      | 2005080 |      | 2175755 |      | 2345766 |      | 2515064 | 26 |
| 5 | 1836654 | 2859 | 2007930 |      | 2178594 |      | 2348594 | 2827 | 2517879 | 25 |
| 6 | 1839513 |      | 2010780 |      | 2181433 |      | 2351421 |      | 2520694 | 24 |
| 7 | 1842372 |      | 2013629 | 2849 | 2184272 |      | 2354248 |      | 2523509 | 23 |
| 8 | 1845231 |      | 2016478 |      | 2187111 | 2838 | 2357075 |      | 2526324 | 22 |
| 9 | 1848090 |      | 2019327 |      | 2189949 |      | 2359902 |      | 2529138 | 21 |
| 0 | 1850949 |      | 2022176 |      | 2192787 |      | 2362729 |      | 2531952 | 20 |
| 1 | 1853808 | 2858 | 2025025 |      | 2195625 | 2837 | 2365555 | 2826 | 2534766 | 19 |
| 2 | 1856666 |      | 2027874 |      | 2198463 |      | 2368381 |      | 2537580 | 18 |
| 3 | 1859524 |      | 2030722 | 2848 | 2201300 |      | 2371207 |      | 2540393 | 17 |
| 4 | 1862382 |      | 2033570 |      | 2204137 |      | 2374033 |      | 2543206 | 16 |
| 5 | 1865240 |      | 2036418 |      | 2206974 |      | 2376859 | 2825 | 2546019 | 15 |
| 6 | 1868098 |      | 2039266 |      | 2209811 |      | 2379684 |      | 2548832 | 14 |
| 7 | 1870956 | 2857 | 2042114 |      | 2212648 |      | 2382589 |      | 2551645 | 13 |
| 8 | 1873813 |      | 2044962 | 2847 | 2215485 |      | 2385334 |      | 2554458 | 12 |
| 9 | 1876670 |      | 2047809 |      | 2218322 | 2836 | 2388159 |      | 2557270 | 11 |
| 0 | 1879527 |      | 2050656 |      | 2221158 |      | 2390983 |      | 2560082 | 10 |
| 1 | 1882384 |      | 2053503 |      | 2223994 |      | 2393808 | 2824 | 2562894 | 9  |
| 2 | 1885241 |      | 2056350 |      | 2226830 |      | 2396632 |      | 2565706 | 8  |
| 3 | 1888098 | 2856 | 2059197 | 2846 | 2229666 |      | 2399456 |      | 2568517 | 7  |
| 4 | 1890954 |      | 2062043 |      | 2232502 |      | 2402280 |      | 2571328 | 6  |
| 5 | 1893810 |      | 2064889 |      | 2235337 |      | 2405104 |      | 2574139 | 5  |
| 6 | 1896666 |      | 2067735 |      | 2238172 |      | 2407927 | 2823 | 2576950 | 4  |
| 7 | 1899522 |      | 2070581 |      | 2241007 |      | 2410750 |      | 2579760 | 3  |
| 8 | 1902378 |      | 2073427 |      | 2243842 |      | 2413573 |      | 2582570 | 2  |
| 9 | 1905234 |      | 2076272 | 2845 | 2246677 | 2834 | 2416396 |      | 2585380 | 1  |
| 0 | 1908090 |      | 2079117 |      | 2249511 |      | 2419219 |      | 2588190 | 0  |
|   | 79      |      | 78      |      | 77      |      | 76      |      | 75      |    |



# CANON SIN VVM VEL SEMISSIVM

|    | 15      |      | 16      |      | 17      |      | 18      |      | 19      |    |
|----|---------|------|---------|------|---------|------|---------|------|---------|----|
| 0  | 2588190 |      | 2756373 |      | 2923717 |      | 3090170 |      | 3255682 |    |
| 1  | 2591000 | 2809 | 2759169 |      | 2926499 | 1    | 3092936 | 6    | 3258432 | 60 |
| 2  | 2593809 |      | 2761965 |      | 2929280 |      | 3095702 |      | 3261182 | 59 |
| 3  | 2596618 |      | 2764761 | 5    | 2932061 |      | 3098468 |      | 3263931 | 58 |
| 4  | 2599427 |      | 2767556 |      | 2934842 |      | 3101234 | 5    | 3266681 | 57 |
| 5  | 2602236 |      | 2770351 |      | 2937623 | 1780 | 3103999 |      | 3269430 | 56 |
| 6  | 2605045 | 8    | 2773146 |      | 2940403 |      | 3106764 |      | 3272179 | 55 |
| 7  | 2607853 |      | 2775941 | 4    | 2943183 |      | 3109529 |      | 3274927 | 54 |
| 8  | 2610661 |      | 2778735 |      | 2945963 |      | 3112294 | 4    | 3277675 | 53 |
| 9  | 2613469 |      | 2781529 |      | 2948743 |      | 3115058 |      | 3280423 | 52 |
| 10 | 2616277 | 7    | 2784323 |      | 2951523 |      | 3117822 |      | 3283171 | 51 |
| 11 | 2619084 |      | 2787117 | 3    | 2954302 | 2779 | 3120586 | 3    | 3285918 | 50 |
| 12 | 2621891 |      | 2789911 |      | 2957081 |      | 3123349 |      | 3288665 | 49 |
| 13 | 2624698 |      | 2792704 |      | 2959860 |      | 3126112 |      | 3291412 | 48 |
| 14 | 2627505 |      | 2795497 |      | 2962638 | 8    | 3128875 |      | 3294159 | 47 |
| 15 | 2630312 | 6    | 2798290 |      | 2965416 |      | 3131638 | 2    | 3296906 | 46 |
| 16 | 2633118 |      | 2801082 | 2    | 2968194 |      | 3134400 |      | 3299652 | 45 |
| 17 | 2635924 |      | 2803874 |      | 2970972 |      | 3137162 |      | 3302398 | 44 |
| 18 | 2638730 |      | 2806666 |      | 2973750 | 7    | 3139924 |      | 3305144 | 43 |
| 19 | 2641536 |      | 2809458 |      | 2976527 |      | 3142686 |      | 3307889 | 42 |
| 20 | 2644342 | 5    | 2812250 | 1    | 2979304 | 1    | 3145448 | 1    | 3310634 | 41 |
| 21 | 2647147 |      | 2815041 |      | 2982081 | 6    | 3148209 |      | 3313379 | 40 |
| 22 | 2649952 |      | 2817832 |      | 2984857 |      | 3150970 |      | 3316123 | 39 |
| 23 | 2652757 |      | 2820623 |      | 2987633 |      | 3153731 | 2760 | 3318867 | 38 |
| 24 | 2655562 | 4    | 2823414 | 2790 | 2990409 |      | 3156491 |      | 3321611 | 37 |
| 25 | 2658366 |      | 2826204 |      | 2993185 | 5    | 3159251 |      | 3324355 | 36 |
| 26 | 2661170 |      | 2828994 |      | 2995960 |      | 3162011 | 2759 | 3327098 | 35 |
| 27 | 2663974 | 3    | 2831784 |      | 2998735 |      | 3164770 |      | 3329841 | 34 |
| 28 | 2666777 |      | 2834574 |      | 3001510 | 4    | 3167529 |      | 3332585 | 33 |
| 29 | 2669580 |      | 2837364 | 2789 | 3004284 |      | 3170288 |      | 3335327 | 32 |
| 30 | 2672383 |      | 2840153 |      | 3007058 |      | 3173047 | 8    | 3338069 | 31 |
|    | 74      |      | 73      |      | 72      |      | 71      |      | 70      | 30 |



|   | 15      |      | 16      |      | 17      |      | 18      |      | 19      |      | 30 |
|---|---------|------|---------|------|---------|------|---------|------|---------|------|----|
| 1 | 2675186 |      | 2842942 |      | 3009832 |      | 3175805 |      | 3340811 |      | 29 |
| 2 | 2677989 |      | 2845731 |      | 3012606 |      | 3178563 | 8    | 3343553 | 1    | 28 |
| 3 | 2680792 |      | 2848520 | 2788 | 3015380 | 3    | 3181321 |      | 3346294 |      | 27 |
| 4 | 2683595 | 2    | 2851308 |      | 3018153 |      | 3184079 |      | 3349035 |      | 26 |
| 5 | 2686397 |      | 2854096 |      | 3020926 |      | 3186837 | 7    | 3351776 | 2740 | 25 |
| 6 | 2689199 |      | 2856884 |      | 3023699 |      | 3189594 |      | 3354516 |      | 24 |
| 7 | 2692001 | 1    | 2859672 | 7    | 3026472 | 2    | 3192351 |      | 3357256 |      | 23 |
| 8 | 2694802 |      | 2862459 |      | 3029244 |      | 3195108 | 6    | 3359996 |      | 22 |
| 9 | 2697603 |      | 2865246 |      | 3032016 |      | 3197864 |      | 3362736 | 2739 | 21 |
| 0 | 2700404 |      | 2868033 |      | 3034788 | 1    | 3200620 | 5    | 3365475 |      | 20 |
| 1 | 2703205 | 2800 | 2870819 | 6    | 3037559 |      | 3203375 |      | 3368214 |      | 19 |
| 2 | 2706005 |      | 2873605 |      | 3040330 |      | 3206130 |      | 3370953 |      | 18 |
| 3 | 2708805 |      | 2876391 |      | 3043101 |      | 3208885 |      | 3373691 | 8    | 17 |
| 4 | 2711605 |      | 2879177 |      | 3045872 |      | 3211640 |      | 3376429 |      | 16 |
| 5 | 2714405 | 2799 | 2881963 | 5    | 3048643 | 2770 | 3214395 |      | 3379167 |      | 15 |
| 6 | 2717204 |      | 2884748 |      | 3051413 |      | 3217150 | 4    | 3381905 | 7    | 14 |
| 7 | 2720003 |      | 2887533 |      | 3054183 |      | 3219904 |      | 3384642 |      | 13 |
| 8 | 2722802 |      | 2890318 |      | 3056953 |      | 3222658 |      | 3387379 |      | 12 |
| 9 | 2725601 |      | 2893103 |      | 3059723 |      | 3225412 | 3    | 3390116 | 6    | 11 |
| 0 | 2728400 | 8    | 2895888 | 4    | 3062492 | 2769 | 3228165 |      | 3392852 |      | 10 |
| 1 | 2731198 |      | 2898672 |      | 3065261 |      | 3230918 |      | 3395588 |      | 9  |
| 2 | 2733996 |      | 2901456 |      | 3068030 |      | 3233671 | 2    | 3398324 |      | 8  |
| 3 | 2736794 |      | 2904240 | 3    | 3070798 | 8    | 3236423 |      | 3401060 | 5    | 7  |
| 4 | 2739592 | 7    | 2907023 |      | 3073566 |      | 3239175 |      | 3403795 |      | 6  |
| 5 | 2742389 |      | 2909806 |      | 3076334 |      | 3241927 |      | 3406530 |      | 5  |
| 6 | 2745186 |      | 2912589 | 2    | 3079102 | 7    | 3244679 | 1    | 3409265 | 4    | 4  |
| 7 | 2747983 |      | 2915371 |      | 3081869 |      | 3247430 |      | 3411999 |      | 3  |
| 8 | 2750780 |      | 2918153 |      | 3084636 |      | 3250181 |      | 3414733 |      | 2  |
| 9 | 2753577 |      | 2920935 |      | 3087403 |      | 3252932 | 2750 | 3417467 |      | 1  |
| 0 | 2756373 | 6    | 2923717 |      | 3090170 |      | 3255682 |      | 3420201 |      | 0  |
|   | 74      |      | 73      |      | 72      |      | 71      |      | 70      |      |    |



# CANON SIN VVM VEL SEMISSIVM

| 20 |         | 21   |         | 22   |         | 23   |         | 24   |         |
|----|---------|------|---------|------|---------|------|---------|------|---------|
|    | 3420201 |      | 3583679 |      | 3746066 |      | 3907311 |      | 4067366 |
| 1  | 3422934 | 2733 | 3586395 | 5    | 3748763 |      | 3909989 |      | 4070023 |
| 2  | 3425667 |      | 3589110 |      | 3751460 | 6    | 3912666 | 7    | 4072680 |
| 3  | 3428400 |      | 3591825 |      | 3754156 |      | 3915343 |      | 4075337 |
| 4  | 3431133 |      | 3594540 | 4    | 3756852 |      | 3918020 |      | 4077993 |
| 5  | 3433865 | 2    | 3597254 |      | 3759548 |      | 3920696 | 6    | 4080649 |
| 6  | 3436597 |      | 3599968 |      | 3762243 | 5    | 3923372 |      | 4083305 |
| 7  | 3439329 | 1    | 3602682 |      | 3764938 |      | 3926048 | 5    | 4085960 |
| 8  | 3442060 |      | 3605395 | 3    | 3767633 | 4    | 3928723 |      | 4088615 |
| 9  | 3444791 |      | 3608108 |      | 3770327 |      | 3931398 | 4    | 4091269 |
| 10 | 3447522 |      | 3610821 | 2    | 3773021 |      | 3934072 |      | 4093923 |
| 11 | 3450253 | 2730 | 3613533 |      | 3775715 | 3    | 3936746 |      | 4096577 |
| 12 | 3452983 |      | 3616245 |      | 3778408 |      | 3939420 | 3    | 4099231 |
| 13 | 3455713 |      | 3618957 |      | 3781101 |      | 3942093 |      | 4101884 |
| 14 | 3458442 | 2729 | 3621669 | 1    | 3783794 | 2    | 3944766 |      | 4104537 |
| 15 | 3461171 |      | 3624380 |      | 3786486 |      | 3947439 |      | 4107189 |
| 16 | 3463900 |      | 3627091 |      | 3789178 |      | 3950112 | 2    | 4109841 |
| 17 | 3466629 | 8    | 3629802 | 2710 | 3791870 |      | 3952784 |      | 4112493 |
| 18 | 3469357 |      | 3632512 |      | 3794562 | 1    | 3955456 |      | 4115144 |
| 19 | 3472085 |      | 3635222 |      | 3797253 |      | 3958128 | 1    | 4117795 |
| 20 | 3474813 | 7    | 3637932 |      | 3799944 |      | 3960799 |      | 4120446 |
| 21 | 3477540 |      | 3640642 | 2709 | 3802635 | 2690 | 3963470 | 2670 | 4123096 |
| 22 | 3480267 |      | 3643351 |      | 3805345 |      | 3966140 |      | 4125746 |
| 23 | 3482994 |      | 3646060 |      | 3808015 | 2689 | 3968810 |      | 4128395 |
| 24 | 3485721 |      | 3648768 | 8    | 3810704 |      | 3971480 |      | 4131044 |
| 25 | 3488447 | 6    | 3651476 |      | 3813393 |      | 3974149 | 2669 | 4133693 |
| 26 | 3491173 |      | 3654184 |      | 3816082 |      | 3976818 |      | 4136341 |
| 27 | 3493899 | 5    | 3656892 | 7    | 3818771 | 8    | 3979487 | 8    | 4138989 |
| 28 | 3496624 |      | 3659599 |      | 3821459 |      | 3982155 |      | 4141637 |
| 29 | 3499349 |      | 3662306 | 6    | 3824147 | 7    | 3984823 |      | 4144284 |
| 30 | 3502075 | 4    | 3665012 |      | 3826834 |      | 3987491 |      | 4146932 |
| 69 |         | 68   |         | 67   |         | 66   |         | 65   |         |



# RECTARVM IN CIRCULO SVBTENSARVM. 119

|    | 20      |      | 21      |      | 22      |      | 23      |      | 24      |         |
|----|---------|------|---------|------|---------|------|---------|------|---------|---------|
| 31 | 3504799 |      | 3667718 |      | 3829521 |      | 3990159 | 7    | 4149579 | 29      |
| 32 | 3507523 |      | 3670424 |      | 3832208 |      | 3992826 |      | 4152226 | 6 28    |
| 33 | 3510247 |      | 3673130 | 5    | 3834895 | 6    | 3995493 |      | 4154872 | 27      |
| 34 | 3512971 | 3    | 3675835 |      | 3837581 |      | 3998157 | 6    | 4157518 | 5 26    |
| 35 | 3515694 |      | 3678541 |      | 3840267 |      | 4000825 |      | 4160163 | 25      |
| 36 | 3518417 |      | 3681246 |      | 3842953 | 5    | 4003491 | 5    | 4162808 | 24      |
| 37 | 3521140 | 2    | 3683951 | 4    | 3845638 |      | 4006156 |      | 4165453 | 4 23    |
| 38 | 3523861 |      | 3686655 |      | 3848323 |      | 4008821 |      | 4168097 | 22      |
| 39 | 3526584 |      | 3689359 | 3    | 3851008 | 4    | 4011486 | 4    | 4170741 | 21      |
| 40 | 3529306 | 1    | 3692062 |      | 3853692 |      | 4014150 |      | 4173385 | 3 20    |
| 41 | 3532027 |      | 3694765 |      | 3856376 |      | 4016814 |      | 4176028 | 19      |
| 42 | 3534748 |      | 3697468 | 2    | 3859060 | 3    | 4019478 | 3    | 4178671 | 18      |
| 43 | 3537469 |      | 3700170 |      | 3861743 |      | 4022141 |      | 4181313 | 2 17    |
| 44 | 3540190 | 2720 | 3702871 |      | 3864426 |      | 4024804 |      | 4183955 | 16      |
| 45 | 3542910 |      | 3705574 |      | 3867109 | 2    | 4027467 |      | 4186592 | 15      |
| 46 | 3545630 |      | 3708276 | 1    | 3869791 |      | 4030130 | 2    | 4189239 | 1 14    |
| 47 | 3548350 |      | 3710977 |      | 3872473 |      | 4032792 |      | 4191880 | 13      |
| 48 | 3551070 |      | 3713678 |      | 3875155 |      | 4035454 | 1    | 4194521 | 12      |
| 49 | 3553789 | 2719 | 3716379 |      | 3877838 | 1    | 4038115 |      | 4197162 | 2640 11 |
| 50 | 3556508 |      | 3719080 | 2700 | 3880518 |      | 4040776 |      | 4199802 | 10      |
| 51 | 3559227 | 8    | 3721780 |      | 3883199 |      | 4043437 | 2660 | 4202442 | 9       |
| 52 | 3561945 |      | 3724480 |      | 3885880 | 2680 | 4046097 |      | 4205081 | 2639 8  |
| 53 | 3564663 | 7    | 3727179 | 2699 | 3888560 |      | 4048757 | 2659 | 4207720 | 7       |
| 54 | 3567380 |      | 3729878 |      | 3891240 |      | 4051416 |      | 4210359 | 8 6     |
| 55 | 3570097 |      | 3732577 | 8    | 3893919 |      | 4054075 |      | 4212997 | 5       |
| 56 | 3572814 |      | 3735275 |      | 3896598 |      | 4056734 | 8    | 4215635 | 4       |
| 57 | 3575531 | 6    | 3737973 |      | 3899277 | 8    | 4059392 |      | 4218273 | 7 3     |
| 58 | 3578247 |      | 3740671 |      | 3901955 |      | 4062050 |      | 4220910 | 2       |
| 59 | 3580963 |      | 3743369 | 7    | 3904633 |      | 4064708 |      | 4223547 | 6 1     |
| 60 | 3583679 |      | 3746066 |      | 3907311 |      | 4067366 |      | 4226183 | 0       |
|    | 69      |      | 68      |      | 67      |      | 66      |      | 65      |         |



# CANON SIN V V M V E L S E M I S S I V M

|    | 25      |      | 26      |      | 27      |      | 28      |      | 29      |      |
|----|---------|------|---------|------|---------|------|---------|------|---------|------|
|    | 4226183 |      | 4383712 |      | 4539905 |      | 4694716 |      | 4848096 | 60   |
| 1  | 4228819 | 2616 | 4386326 | 2614 | 4542497 | 2591 | 4697284 | 2568 | 4850640 | 2544 |
| 2  | 4231455 | 5    | 4388940 | 4    | 4545088 | 1    | 4699852 | 8    | 4853184 | 3    |
| 3  | 4234090 | 5    | 4391554 | 4    | 4547679 | 1    | 4702419 | 7    | 4855727 | 3    |
| 4  | 4236725 | 5    | 4394167 | 3    | 4550270 | 2590 | 4704986 | 7    | 4858270 | 2    |
| 5  | 4239360 | 5    | 4396780 | 3    | 4552860 | 0    | 4707553 | 7    | 4860812 | 2    |
| 6  | 4241994 | 4    | 4399392 | 2    | 4555450 | 0    | 4710119 | 6    | 4863354 | 1    |
| 7  | 4244628 | 4    | 4402004 | 2    | 4558039 | 2589 | 4712685 | 6    | 4865895 | 1    |
| 8  | 4247272 | 4    | 4404616 | 2    | 4560628 | 9    | 4715250 | 5    | 4868436 | 1    |
| 9  | 4249895 | 3    | 4407227 | 1    | 4563216 | 8    | 4717815 | 5    | 4870977 | 2540 |
| 10 | 4252528 | 3    | 4409838 | 1    | 4565804 | 8    | 4720380 | 5    | 4873517 | 0    |
| 11 | 4255161 | 2    | 4412449 | 1    | 4568392 | 8    | 4722944 | 4    | 4876057 | 2539 |
| 12 | 4257793 | 2    | 4415059 | 2610 | 4570979 | 7    | 4725508 | 4    | 4878596 | 9    |
| 13 | 4260425 | 1    | 4417669 | 0    | 4573566 | 7    | 4728071 | 3    | 4881135 | 9    |
| 14 | 4263056 | 1    | 4420278 | 2609 | 4576153 | 7    | 4730634 | 3    | 4883674 | 8    |
| 15 | 4265687 | 1    | 4422887 | 9    | 4578739 | 6    | 4733197 | 3    | 4886212 | 8    |
| 16 | 4268318 | 1    | 4425496 | 9    | 4581325 | 6    | 4735759 | 2    | 4888750 | 7    |
| 17 | 4270949 | 2630 | 4428104 | 8    | 4583911 | 6    | 4738321 | 2    | 4891287 | 7    |
| 18 | 4273579 | 0    | 4430712 | 8    | 4586496 | 5    | 4740882 | 1    | 4893824 | 7    |
| 19 | 4276209 | 2629 | 4433320 | 8    | 4589081 | 5    | 4743443 | 1    | 4896361 | 6    |
| 20 | 4278838 | 9    | 4435927 | 7    | 4591665 | 4    | 4746004 | 2560 | 4898897 | 6    |
| 21 | 4281467 | 9    | 4438534 | 7    | 4594249 | 4    | 4748564 | 0    | 4901433 | 5    |
| 22 | 4284096 | 9    | 4441140 | 6    | 4596833 | 4    | 4751124 | 2559 | 4903968 | 5    |
| 23 | 4286724 | 8    | 4443746 | 6    | 4599416 | 3    | 4753683 | 9    | 4906503 | 4    |
| 24 | 4289352 | 8    | 4446352 | 6    | 4601999 | 3    | 4756242 | 9    | 4909037 | 4    |
| 25 | 4291979 | 7    | 4448957 | 5    | 4604581 | 2    | 4758801 | 8    | 4911571 | 4    |
| 26 | 4294606 | 7    | 4451562 | 5    | 4607163 | 2    | 4761359 | 8    | 4914105 | 3    |
| 27 | 4297233 | 7    | 4454167 | 5    | 4609744 | 1    | 4763917 | 7    | 4916638 | 3    |
| 28 | 4299859 | 6    | 4456771 | 4    | 4612325 | 1    | 4766474 | 7    | 4919171 | 2    |
| 29 | 4302485 | 6    | 4459375 | 4    | 4614906 | 1    | 4769031 | 7    | 4921703 | 2    |
| 30 | 4305111 | 6    | 4461978 | 3    | 4617486 | 2580 | 4771588 | 6    | 4924235 | 2    |
|    | 64      |      | 63      |      | 62      |      | 61      |      | 60      |      |



# RECTARVM IN CIRCULO SVBTENSARVM. 120

| 28 |         | 26   |         | 27   |         | 28   |         | 29   |         |      |    |
|----|---------|------|---------|------|---------|------|---------|------|---------|------|----|
| 31 | 4307736 | 5    | 4464581 | 3    | 4620066 | 2580 | 4774144 | 6    | 4926767 | 1    | 29 |
| 32 | 4310361 | 5    | 4467184 | 3    | 4622646 | 0    | 4776700 | 5    | 4929298 | 1    | 28 |
| 33 | 4312986 | 5    | 4469786 | 2    | 4625225 | 2579 | 4779255 | 5    | 4931829 | 2530 | 27 |
| 34 | 4315610 | 4    | 4472388 | 2    | 4627804 | 8    | 4781810 | 5    | 4934359 | 0    | 26 |
| 35 | 4318234 | 4    | 4474990 | 2    | 4630382 | 8    | 4784365 | 4    | 4936889 | 2529 | 25 |
| 36 | 4320858 | 4    | 4477591 | 1    | 4632960 | 8    | 4786919 | 4    | 4939418 | 9    | 24 |
| 37 | 4323481 | 3    | 4480192 | 1    | 4635538 | 7    | 4789473 | 3    | 4941947 | 9    | 23 |
| 38 | 4326104 | 3    | 4482792 | 2600 | 4638115 | 7    | 4792026 | 3    | 4944476 | 8    | 22 |
| 39 | 4328726 | 2    | 4485392 | 0    | 4640692 | 6    | 4794579 | 3    | 4947004 | 8    | 21 |
| 40 | 4331348 | 2    | 4487992 | 0    | 4643268 | 6    | 4797132 | 2    | 4949532 | 7    | 20 |
| 41 | 4333970 | 2    | 4490591 | 2599 | 4645844 | 6    | 4799684 | 2    | 4952059 | 7    | 19 |
| 42 | 4336591 | 1    | 4493190 | 9    | 4648420 | 5    | 4802236 | 1    | 4954586 | 7    | 18 |
| 43 | 4339212 | 1    | 4495788 | 8    | 4650995 | 5    | 4804787 | 1    | 4957113 | 6    | 17 |
| 44 | 4341833 | 1    | 4498386 | 8    | 4653570 | 5    | 4807338 | 2550 | 4959639 | 6    | 16 |
| 45 | 4344453 | 2620 | 4500984 | 8    | 4656145 | 4    | 4809888 | 0    | 4962165 | 5    | 15 |
| 46 | 4347073 | 0    | 4503582 | 8    | 4658719 | 4    | 4812438 | 0    | 4964690 | 5    | 14 |
| 47 | 4349693 | 0    | 4506179 | 7    | 4661293 | 3    | 4814988 | 2549 | 4967215 | 5    | 13 |
| 48 | 4352312 | 2619 | 4508776 | 7    | 4663866 | 3    | 4817537 | 9    | 4969740 | 4    | 12 |
| 49 | 4354931 | 9    | 4511372 | 6    | 4666439 | 3    | 4820086 | 9    | 4972264 | 4    | 11 |
| 50 | 4357549 | 8    | 4513968 | 6    | 4669012 | 2    | 4822635 | 8    | 4974788 | 3    | 10 |
| 51 | 4360167 | 8    | 4516563 | 5    | 4671584 | 2    | 4825183 | 8    | 4977311 | 3    | 9  |
| 52 | 4362785 | 8    | 4519158 | 5    | 4674156 | 1    | 4827731 | 7    | 4979834 | 2    | 8  |
| 53 | 4365402 | 7    | 4521753 | 5    | 4676727 | 1    | 4830278 | 7    | 4982356 | 2    | 7  |
| 54 | 4368019 | 7    | 4524347 | 4    | 4679298 | 1    | 4832825 | 6    | 4984878 | 1    | 6  |
| 55 | 4370635 | 6    | 4526941 | 4    | 4671869 | 2570 | 4835371 | 6    | 4987399 | 1    | 5  |
| 56 | 4373251 | 6    | 4529535 | 4    | 4684439 | 0    | 4837917 | 5    | 4989920 | 1    | 4  |
| 57 | 4375867 | 6    | 4532128 | 3    | 4687009 | 0    | 4840462 | 5    | 4992441 | 2520 | 3  |
| 58 | 4378482 | 5    | 4534721 | 3    | 4689578 | 2569 | 4843007 | 5    | 4994961 | 0    | 2  |
| 59 | 4381097 | 5    | 4537313 | 2    | 4692147 | 9    | 4845552 | 4    | 4997481 | 2519 | 1  |
| 60 | 4383712 | 5    | 4539905 | 2    | 4694716 | 9    | 4848096 | 4    | 5000000 | 9    | 0  |
| 64 |         | 63   |         | 62   |         | 61   |         | 60   |         |      |    |



# CANON SINVM VEL SEMISSIVM

|    | 30      |      | 31      |      | 32      |      | 33      |      | 34      |      |
|----|---------|------|---------|------|---------|------|---------|------|---------|------|
|    | 5000000 |      | 5150381 |      | 5299192 |      | 5446390 |      | 5591929 |      |
| 1  | 5002519 | 2519 | 5152874 | 2493 | 5301659 | 2466 | 5448829 | 2439 | 5594340 | 2411 |
| 2  | 5005038 | 8    | 5155367 | 2    | 5304125 | 6    | 5451268 | 9    | 5596751 | 2410 |
| 3  | 5007556 | 8    | 5157859 | 2    | 5306591 | 5    | 5453797 | 8    | 5599161 | 0    |
| 4  | 5010074 | 7    | 5160351 | 2    | 5309056 | 5    | 5456145 | 8    | 5601571 | 0    |
| 5  | 5012591 | 7    | 5162843 | 1    | 5311521 | 4    | 5458583 | 7    | 5603981 | 2409 |
| 6  | 5015108 | 6    | 5165334 | 1    | 5313985 | 4    | 5461020 | 6    | 5606390 | 8    |
| 7  | 5017624 | 6    | 5167825 | 2490 | 5316449 | 4    | 5463456 | 6    | 5608798 | 8    |
| 8  | 5020140 | 6    | 5170315 | 0    | 5318913 | 3    | 5465802 | 6    | 5611206 | 8    |
| 9  | 5022656 | 5    | 5172805 | 2489 | 5321376 | 3    | 5468328 | 5    | 5613614 | 7    |
| 10 | 5025171 | 5    | 5175294 | 9    | 5323839 | 2    | 5470763 | 5    | 5616021 | 6    |
| 11 | 5027686 | 4    | 5177783 | 8    | 5326301 | 2    | 5473198 | 4    | 5618427 | 6    |
| 12 | 5030200 | 4    | 5180271 | 8    | 5328763 | 1    | 5475632 | 4    | 5620833 | 6    |
| 13 | 5032714 | 3    | 5182759 | 7    | 5331224 | 1    | 5478066 | 3    | 5623239 | 5    |
| 14 | 5035227 | 3    | 5185246 | 7    | 5333685 | 2460 | 5480499 | 3    | 5625644 | 5    |
| 15 | 5037740 | 3    | 5187733 | 7    | 5336145 | 0    | 5482932 | 2    | 5628049 | 4    |
| 16 | 5040253 | 2    | 5190220 | 6    | 5338605 | 0    | 5485364 | 2    | 5630453 | 4    |
| 17 | 5042765 | 2    | 5192706 | 6    | 5341065 | 2459 | 5487796 | 2    | 5632857 | 3    |
| 18 | 5045277 | 1    | 5195192 | 5    | 5343524 | 9    | 5490228 | 1    | 5635260 | 3    |
| 19 | 5047788 | 1    | 5197667 | 5    | 5345983 | 8    | 5492659 | 1    | 5637663 | 3    |
| 20 | 5050299 | 2510 | 5200162 | 4    | 5348441 | 8    | 5495090 | 2430 | 5640066 | 2    |
| 21 | 5052809 | 0    | 5202646 | 4    | 5350898 | 7    | 5497520 | 0    | 5642468 | 1    |
| 22 | 5055319 | 0    | 5205130 | 4    | 5353355 | 7    | 5499950 | 2429 | 5644869 | 1    |
| 23 | 5057829 | 2509 | 5207614 | 3    | 5355812 | 6    | 5502379 | 9    | 5647270 | 2400 |
| 24 | 5060338 | 9    | 5210097 | 3    | 5358268 | 6    | 5504808 | 8    | 5649670 | 0    |
| 25 | 5062847 | 8    | 5212580 | 2    | 5360724 | 5    | 5507236 | 8    | 5652070 | 2399 |
| 26 | 5065355 | 8    | 5215062 | 2    | 5363179 | 5    | 5509664 | 7    | 5654469 | 9    |
| 27 | 5067863 | 7    | 5217544 | 1    | 5365634 | 4    | 5512091 | 7    | 5656868 | 8    |
| 28 | 5070370 | 7    | 5220025 | 1    | 5368088 | 4    | 5514518 | 6    | 5659266 | 8    |
| 29 | 5072877 | 7    | 5222506 | 2480 | 5370542 | 4    | 5516944 | 6    | 5661664 | 8    |
| 30 | 5075384 | 6    | 5224986 | 0    | 5372996 | 3    | 5519370 | 5    | 5664062 | 7    |
|    | 59      |      | 58      |      | 57      |      | 56      |      | 55      |      |



# RECTARVM IN CIRCULO SVBTENSARVM 122

|    | 30      |      | 31      |      | 32      |      | 33      |      | 34      |         |
|----|---------|------|---------|------|---------|------|---------|------|---------|---------|
| 31 | 5077890 | 6    | 5227466 | 0    | 5375449 | 3    | 5521795 | 5    | 5666459 | 7 29    |
| 32 | 5080396 | 5    | 5229946 | 2479 | 5377902 | 2    | 5524220 | 5    | 5668856 | 6 28    |
| 33 | 5082901 | 5    | 5232425 | 9    | 5380354 | 2    | 5526645 | 4    | 5671252 | 9 27    |
| 34 | 5085406 | 5    | 5234904 | 8    | 5382806 | 2    | 5529069 | 4    | 5673648 | 5 26    |
| 35 | 5087911 | 4    | 5237382 | 8    | 5385258 | 1    | 5531491 | 3    | 5676043 | 5 25    |
| 36 | 5090415 | 4    | 5239860 | 7    | 5387709 | 2450 | 5533916 | 2    | 5678438 | 4 24    |
| 37 | 5092919 | 3    | 5242337 | 7    | 5390159 | 0    | 5536338 | 2    | 5680832 | 4 23    |
| 38 | 5095422 | 3    | 5244614 | 6    | 5392609 | 2449 | 5538760 | 2    | 5683226 | 3 22    |
| 39 | 5097925 | 2    | 5247290 | 6    | 5395058 | 9    | 5541182 | 1    | 5685619 | 3 21    |
| 40 | 5100427 | 2    | 5249766 | 5    | 5397507 | 8    | 5543603 | 1    | 5688012 | 2 20    |
| 41 | 5102929 | 1    | 5252241 | 5    | 5399855 | 8    | 5546024 | 2420 | 5690404 | 2 19    |
| 42 | 5105430 | 1    | 5254716 | 5    | 5402403 | 8    | 5548444 | 0    | 5692796 | 1 18    |
| 43 | 5107931 | 2500 | 5257191 | 4    | 5404851 | 7    | 5550864 | 2419 | 5695187 | 1 17    |
| 44 | 5110431 | 0    | 5259665 | 4    | 5407298 | 7    | 5553283 | 9    | 5697578 | 2390 16 |
| 45 | 5112931 | 0    | 5262139 | 3    | 5409745 | 6    | 5555702 | 8    | 5699968 | 0 15    |
| 46 | 5115431 | 2499 | 5264612 | 3    | 5412191 | 6    | 5558120 | 8    | 5702358 | 2389 14 |
| 47 | 5117930 | 9    | 5267085 | 2    | 5414637 | 5    | 5560538 | 8    | 5704747 | 9 13    |
| 48 | 5120429 | 8    | 5269557 | 2    | 5417082 | 5    | 5562956 | 7    | 5707136 | 8 12    |
| 49 | 5122927 | 8    | 5272029 | 2    | 5419527 | 5    | 5565373 | 7    | 5709524 | 8 11    |
| 50 | 5125425 | 7    | 5274501 | 1    | 5421972 | 4    | 5567790 | 6    | 5711912 | 7 10    |
| 51 | 5127922 | 7    | 5276972 | 1    | 5424416 | 3    | 5570206 | 6    | 5714299 | 7 9     |
| 52 | 5130419 | 7    | 5279443 | 2476 | 5426859 | 3    | 5572622 | 5    | 5716686 | 6 8     |
| 53 | 5132916 | 6    | 5281913 | 6    | 5429302 | 3    | 5575037 | 5    | 5719072 | 6 7     |
| 54 | 5135412 | 6    | 5284383 | 2469 | 5431745 | 2    | 5577452 | 4    | 5721458 | 6 6     |
| 55 | 5137908 | 5    | 5286852 | 9    | 5434187 | 2    | 5579866 | 4    | 5723844 | 5 5     |
| 56 | 5140403 | 5    | 5299321 | 9    | 5436629 | 1    | 5582280 | 3    | 5726229 | 4 4     |
| 57 | 5142898 | 5    | 5291789 | 8    | 5439070 | 2440 | 5584693 | 3    | 5728613 | 4 3     |
| 58 | 5145393 | 4    | 5294257 | 8    | 5441510 | 0    | 5587106 | 2    | 5730997 | 4 2     |
| 59 | 5147887 | 4    | 5296725 | 8    | 5443950 | 0    | 5589518 | 1    | 5733381 | 3 1     |
| 60 | 5150381 | 3    | 5299192 | 7    | 5446390 | 2439 | 5591929 | 1    | 5735764 | 3 0     |
|    | 59      |      | 58      |      | 57      |      | 56      |      | 55      |         |



# CANON SIN VVM VEL SEMISSIVM

|    | 35      |      | 36      |      | 37      |      | 38      |      | 39      |      |
|----|---------|------|---------|------|---------|------|---------|------|---------|------|
|    | 5735764 |      | 5877851 |      | 6018150 |      | 6156615 |      | 6293204 |      |
| 1  | 5738147 | 2382 | 5880205 | 2353 | 6020473 | 2323 | 6158907 | 2291 | 6295464 | 2160 |
| 2  | 5740529 | 2    | 5882558 | 2    | 6022796 | 2    | 6161198 | 1    | 6297724 | 2259 |
| 3  | 5742911 | 1    | 5884910 | 2    | 6025118 | 1    | 6163489 | 1    | 6299983 | 9    |
| 4  | 5745292 | 2380 | 5887262 | 1    | 6027439 | 1    | 6165780 | 2290 | 6302242 | 9    |
| 5  | 5747672 | 0    | 5889613 | 1    | 6029760 | 2120 | 6168070 | 2285 | 6304501 | 8    |
| 6  | 5750052 | 0    | 5891964 | 2350 | 6032080 | 0    | 6170259 | 9    | 6306759 | 8    |
| 7  | 5752432 | 2379 | 5894314 | 0    | 6034400 | 2319 | 6172648 | 8    | 6309016 | 7    |
| 8  | 5754811 | 9    | 5896664 | 2349 | 6036719 | 9    | 6174936 | 8    | 6311273 | 6    |
| 9  | 5757190 | 8    | 5899013 | 8    | 6039038 | 9    | 6177224 | 8    | 6313529 | 5    |
| 10 | 5759568 | 8    | 5901361 | 8    | 6041357 | 8    | 6179512 | 7    | 6315784 | 5    |
| 11 | 5761946 | 7    | 5903709 | 7    | 6043675 | 7    | 6181799 | 6    | 6318039 | 4    |
| 12 | 5764323 | 7    | 5906056 | 7    | 6045992 | 7    | 6184085 | 6    | 6320293 | 4    |
| 13 | 5766700 | 6    | 5908403 | 7    | 6048309 | 6    | 6186371 | 5    | 6322547 | 3    |
| 14 | 5769076 | 6    | 5910750 | 6    | 6050625 | 5    | 6188656 | 4    | 6324800 | 3    |
| 15 | 5771452 | 5    | 5913096 | 6    | 6052940 | 5    | 6190940 | 4    | 6327053 | 2    |
| 16 | 5773827 | 5    | 5915442 | 5    | 6055255 | 5    | 6193224 | 4    | 6329305 | 2    |
| 17 | 5776202 | 4    | 5917787 | 5    | 6057570 | 4    | 6195508 | 3    | 6331557 | 1    |
| 18 | 5778576 | 4    | 5920132 | 4    | 6059884 | 4    | 6197791 | 3    | 6333808 | 1    |
| 19 | 5780950 | 4    | 5922476 | 4    | 6062198 | 3    | 6200074 | 2    | 6336059 | 1    |
| 20 | 5783324 | 3    | 5924820 | 3    | 6064511 | 3    | 6202356 | 2    | 6338310 | 2250 |
| 21 | 5785697 | 2    | 5927163 | 2    | 6066824 | 2    | 6204638 | 1    | 6340560 | 2249 |
| 22 | 5788069 | 2    | 5929505 | 2    | 6069136 | 2    | 6206919 | 2280 | 6342809 | 9    |
| 23 | 5790441 | 1    | 5931847 | 2    | 6071448 | 1    | 6209199 | 0    | 6345058 | 8    |
| 24 | 5792812 | 1    | 5934189 | 1    | 6073759 | 2310 | 6211479 | 2279 | 6347306 | 7    |
| 25 | 5795183 | 2370 | 5936530 | 1    | 6076069 | 0    | 6213758 | 9    | 6349553 | 7    |
| 26 | 5797553 | 0    | 5938871 | 2340 | 6078379 | 2309 | 6216037 | 8    | 6351800 | 6    |
| 27 | 5799923 | 2369 | 5941211 | 0    | 6080688 | 9    | 6218315 | 8    | 6354046 | 6    |
| 28 | 5802292 | 9    | 5943551 | 2339 | 6082997 | 9    | 6220593 | 7    | 6356292 | 5    |
| 29 | 5804661 | 9    | 5945890 | 8    | 6085306 | 8    | 6222870 | 6    | 6358537 | 5    |
| 30 | 5807030 | 8    | 5948228 | 8    | 6087614 | 8    | 6225146 | 6    | 6360782 | 4    |
|    | 54      |      | 53      |      | 52      |      | 51      |      | 50      |      |



# RECTARVM IN CIRCULO SVBTENSARVM<sup>112</sup>

|    | 35      |      | 36      |      | 37      |      | 38      |      | 39      |         |
|----|---------|------|---------|------|---------|------|---------|------|---------|---------|
| 31 | 5809398 | 8    | 5950566 | 8    | 6089922 | 7    | 6227422 | 6    | 6363026 | 4 29    |
| 32 | 5811766 | 7    | 5952904 | 7    | 6092229 | 7    | 6229698 | 5    | 6365270 | 3 28    |
| 33 | 5814133 | 6    | 5955241 | 7    | 6094536 | 6    | 6231973 | 5    | 6367513 | 3 27    |
| 34 | 5816499 | 6    | 5957578 | 6    | 6096842 | 5    | 6234248 | 4    | 6369756 | 3 26    |
| 35 | 5818865 | 5    | 5959914 | 6    | 6099147 | 5    | 6236522 | 4    | 6371999 | 2 25    |
| 36 | 5821230 | 5    | 5962250 | 5    | 6101452 | 4    | 6238796 | 3    | 6374241 | 1 24    |
| 37 | 5823595 | 4    | 5964585 | 4    | 6103756 | 4    | 6241069 | 3    | 6376482 | 2240 23 |
| 38 | 5825959 | 4    | 5966919 | 4    | 6106060 | 4    | 6243342 | 2    | 6378722 | 0 22    |
| 39 | 5828323 | 4    | 5969253 | 3    | 6108364 | 3    | 6245614 | 1    | 6380962 | 2239 21 |
| 40 | 5830687 | 3    | 5971586 | 3    | 6110667 | 3    | 6247885 | 1    | 6383201 | 9 20    |
| 41 | 5833050 | 2    | 5973919 | 2    | 6112970 | 2    | 6250156 | 2270 | 6385440 | 8 19    |
| 42 | 5835412 | 2    | 5976251 | 2    | 6115272 | 1    | 6252426 | 0    | 6387678 | 8 18    |
| 43 | 5837774 | 2    | 5978583 | 2    | 6117573 | 2300 | 6254696 | 0    | 6389916 | 7 17    |
| 44 | 5840136 | 1    | 5980915 | 1    | 6119872 | 0    | 6256966 | 1269 | 6392153 | 7 16    |
| 45 | 5842497 | 1    | 5983246 | 1    | 6122173 | 0    | 6259235 | 8    | 6394390 | 6 15    |
| 46 | 5844858 | 2360 | 5985577 | 2330 | 6124473 | 2199 | 6261503 | 8    | 6396626 | 6 14    |
| 47 | 5847218 | 0    | 5987907 | 0    | 6126772 | 9    | 6263771 | 7    | 6398862 | 5 13    |
| 48 | 5849578 | 2359 | 5990237 | 2329 | 6129071 | 8    | 6266038 | 7    | 6401097 | 5 12    |
| 49 | 5851937 | 8    | 5992566 | 8    | 6131369 | 8    | 6268305 | 7    | 6403332 | 4 11    |
| 50 | 5854295 | 8    | 5994894 | 8    | 6133667 | 7    | 6270572 | 6    | 6405566 | 3 10    |
| 51 | 5856653 | 7    | 5997222 | 7    | 6135964 | 7    | 6272838 | 5    | 6407799 | 3 9     |
| 52 | 5859010 | 7    | 5999549 | 7    | 6138261 | 6    | 6275103 | 5    | 6410032 | 2 8     |
| 53 | 5861367 | 7    | 6001876 | 6    | 6140557 | 6    | 6277368 | 4    | 6412264 | 2 7     |
| 54 | 5863724 | 6    | 6004202 | 6    | 6142853 | 5    | 6279632 | 3    | 6414496 | 2 6     |
| 55 | 5866080 | 6    | 6006528 | 5    | 6145148 | 4    | 6281895 | 3    | 6416728 | 1 5     |
| 56 | 5868436 | 5    | 6008853 | 5    | 6147442 | 4    | 6284158 | 2    | 6418959 | 2230 4  |
| 57 | 5870791 | 4    | 6011178 | 4    | 6149746 | 4    | 6286420 | 2    | 6421189 | 0 3     |
| 58 | 5873145 | 4    | 6013502 | 4    | 6152030 | 3    | 6288682 | 1    | 6423410 | 2229 2  |
| 59 | 5875499 | 3    | 6015826 | 4    | 6154323 | 2    | 6290943 | 1    | 6425648 | 8 1     |
| 60 | 5877852 | 3    | 6018150 | 3    | 6156615 | 2    | 6293204 | 0    | 6427876 | 8 0     |
|    | 54      |      | 53      |      | 52      |      | 51      |      | 50      |         |



# CANON SIN VVM VEL SEMISSIVM

| 40 |         | 41   |         | 42   |         | 43   |         | 44   |         |    |
|----|---------|------|---------|------|---------|------|---------|------|---------|----|
| 1  | 6427876 |      | 6560590 |      | 6691306 |      | 6819984 |      | 6946584 | 60 |
| 1  | 6430104 | 2277 | 6562785 | 2194 | 6693468 | 1    | 6822111 | 2126 | 6948676 | 59 |
| 2  | 6432331 | 7    | 6564979 | 4    | 6695629 | 2160 | 6824237 | 6    | 6950767 | 58 |
| 3  | 6434558 | 7    | 6567173 | 4    | 6697789 | 0    | 6826363 | 6    | 6952858 | 57 |
| 4  | 6436785 | 6    | 6569367 | 3    | 6699949 | 2159 | 6828489 | 5    | 6954949 | 56 |
| 5  | 6439011 | 5    | 6571560 | 3    | 6702108 | 9    | 6830614 | 4    | 6957039 | 55 |
| 6  | 6441236 | 5    | 6573753 | 2    | 6704267 | 8    | 6832738 | 3    | 6959128 | 54 |
| 7  | 6443461 | 4    | 6575945 | 1    | 6706425 | 7    | 6834861 | 3    | 6961216 | 53 |
| 8  | 6445685 | 4    | 6578136 | 2190 | 6708582 | 7    | 6836984 | 3    | 6963304 | 52 |
| 9  | 6447909 | 3    | 6580326 | 0    | 6710739 | 6    | 6839107 | 2    | 6965392 | 51 |
| 10 | 6450132 | 3    | 6582516 | 2189 | 6712895 | 6    | 6841229 | 1    | 6967479 | 50 |
| 11 | 6452355 | 2    | 6584705 | 9    | 6715051 | 5    | 6843350 | 1    | 6969565 | 49 |
| 12 | 6454577 | 2    | 6586894 | 8    | 6717206 | 5    | 6845471 | 2120 | 6971651 | 48 |
| 13 | 6456799 | 1    | 6589082 | 8    | 6719361 | 4    | 6847591 | 0    | 6973736 | 47 |
| 14 | 6459020 | 2220 | 6591270 | 8    | 6721515 | 3    | 6849711 | 2119 | 6975821 | 46 |
| 15 | 6461240 | 0    | 6593458 | 7    | 6723668 | 3    | 6851830 | 9    | 6977905 | 45 |
| 16 | 6463460 | 2219 | 6595645 | 6    | 6725821 | 2    | 6853949 | 8    | 6979988 | 44 |
| 17 | 6465679 | 9    | 6597831 | 5    | 6727973 | 2    | 6856067 | 7    | 6982071 | 43 |
| 18 | 6467898 | 8    | 6600016 | 5    | 6730125 | 1    | 6858184 | 7    | 6984153 | 42 |
| 19 | 6470116 | 7    | 6602201 | 5    | 6732276 | 1    | 6860301 | 6    | 6986235 | 41 |
| 20 | 6472333 | 7    | 6604386 | 4    | 6734427 | 2150 | 6862417 | 6    | 6988316 | 40 |
| 21 | 6474550 | 6    | 6606570 | 3    | 6736577 | 2149 | 6864533 | 5    | 6990396 | 39 |
| 22 | 6476766 | 6    | 6608753 | 3    | 6738726 | 9    | 6866648 | 4    | 6992476 | 38 |
| 23 | 6478982 | 6    | 6610936 | 2    | 6740875 | 9    | 6868762 | 4    | 6994555 | 37 |
| 24 | 6481198 | 5    | 6613118 | 2    | 6743024 | 8    | 6870876 | 3    | 6996634 | 36 |
| 25 | 6483413 | 5    | 6615300 | 1    | 6745172 | 7    | 6872989 | 3    | 6998712 | 35 |
| 26 | 6485628 | 4    | 6617481 | 2180 | 6747319 | 6    | 6875102 | 2    | 7000789 | 34 |
| 27 | 6487842 | 3    | 6619661 | 0    | 6749465 | 6    | 6877214 | 1    | 7002866 | 33 |
| 28 | 6490055 | 3    | 6621841 | 0    | 6751611 | 6    | 6879325 | 1    | 7004942 | 32 |
| 29 | 6492268 | 2    | 6624021 | 2179 | 6753757 | 5    | 6881436 | 2110 | 7007018 | 31 |
| 30 | 6494480 | 2    | 6626200 | 9    | 6755902 | 5    | 6883546 | 0    | 7009093 | 30 |
| 49 |         | 48   |         | 47   |         | 46   |         | 45   |         |    |



# RECTARVM IN CIRCULO SVBTENSARVM. 138

| 40 |         | 41   |         | 42   |         | 43   |         | 44   |         |      |    |
|----|---------|------|---------|------|---------|------|---------|------|---------|------|----|
| 31 | 6496692 | 1    | 6628379 | 8    | 6758047 | 4    | 6885656 | 2109 | 7011167 | 4    | 20 |
| 32 | 6498903 | 1    | 6630557 | 7    | 6760191 | 3    | 6887765 | 9    | 7013241 | 3    | 18 |
| 33 | 6501114 | 2210 | 6632734 | 7    | 6762334 | 3    | 6889874 | 8    | 7015314 | 3    | 27 |
| 34 | 6503324 | 2209 | 6634911 | 6    | 6764477 | 2    | 6891982 | 7    | 7017387 | 2    | 26 |
| 35 | 6505533 | 9    | 6637087 | 6    | 6766619 | 1    | 6894089 | 7    | 7019459 | 1    | 25 |
| 36 | 6507742 | 8    | 6639263 | 5    | 6768760 | 1    | 6896196 | 6    | 7021530 | 1    | 24 |
| 37 | 6509950 | 8    | 6641438 | 4    | 6770901 | 2140 | 6898302 | 6    | 7023601 | 2070 | 23 |
| 38 | 6512158 | 7    | 6643612 | 4    | 6773041 | 0    | 6900408 | 5    | 7025671 | 0    | 22 |
| 39 | 6514365 | 7    | 6645786 | 3    | 6775181 | 2139 | 6902513 | 4    | 7027741 | 2069 | 21 |
| 40 | 6516572 | 6    | 6647959 | 3    | 6777320 | 9    | 6904617 | 4    | 7029810 | 9    | 20 |
| 41 | 6518778 | 6    | 6650132 | 2    | 6779459 | 8    | 6906721 | 3    | 7031879 | 8    | 19 |
| 42 | 6520984 | 5    | 6652304 | 2    | 6781597 | 7    | 6908824 | 3    | 7033947 | 7    | 18 |
| 43 | 6523189 | 5    | 6654476 | 1    | 6783734 | 7    | 6910927 | 2    | 7036014 | 7    | 17 |
| 44 | 6525394 | 4    | 6656647 | 2170 | 6785871 | 6    | 6913029 | 2    | 7038081 | 6    | 16 |
| 45 | 6527598 | 3    | 6658817 | 0    | 6788007 | 6    | 6915131 | 1    | 7040147 | 6    | 15 |
| 46 | 6529801 | 3    | 6660987 | 2169 | 6790143 | 5    | 6917232 | 2100 | 7042213 | 5    | 14 |
| 47 | 6532004 | 2    | 6663156 | 9    | 6792278 | 5    | 6919332 | 0    | 7044278 | 4    | 13 |
| 48 | 6534206 | 2    | 6665325 | 8    | 6794413 | 4    | 6921432 | 2099 | 7046342 | 4    | 12 |
| 49 | 6536408 | 1    | 6667493 | 8    | 6796547 | 4    | 6923531 | 9    | 7048406 | 3    | 11 |
| 50 | 6538609 | 2200 | 6669661 | 7    | 6798681 | 3    | 6925630 | 8    | 7050469 | 3    | 10 |
| 51 | 6540809 | 0    | 6671828 | 6    | 6800814 | 2    | 6927728 | 7    | 7052532 | 2    | 9  |
| 52 | 6543009 | 2199 | 6673994 | 6    | 6802946 | 2    | 6929825 | 7    | 7054594 | 1    | 8  |
| 53 | 6545208 | 9    | 6676160 | 6    | 6805078 | 1    | 6931922 | 6    | 7056655 | 1    | 7  |
| 54 | 6547407 | 9    | 6678326 | 5    | 6807209 | 1    | 6934018 | 6    | 7058716 | 2060 | 6  |
| 55 | 6549606 | 8    | 6680491 | 4    | 6809340 | 2130 | 6936114 | 5    | 7060776 | 0    | 5  |
| 56 | 6551804 | 7    | 6682655 | 3    | 6811470 | 2129 | 6938209 | 4    | 7062836 | 2059 | 4  |
| 57 | 6554001 | 7    | 6684818 | 3    | 6813599 | 9    | 6940303 | 4    | 7064895 | 8    | 3  |
| 58 | 6556198 | 6    | 6686981 | 3    | 6815728 | 8    | 6942397 | 4    | 7066953 | 8    | 2  |
| 59 | 6558394 | 6    | 6689144 | 2    | 6817856 | 8    | 6944491 | 3    | 7069011 | 7    | 1  |
| 60 | 6560590 | 5    | 6691306 | 2    | 6819984 | 7    | 6946584 | 2    | 7071068 | 7    | 0  |
| 49 |         | 48   |         | 47   |         | 46   |         | 45   |         |      |    |



# CANON SIN VVM VEL SEMISSIVM.

| 45 |         | 46   |         | 47   |         | 48   |         | 49   |         |
|----|---------|------|---------|------|---------|------|---------|------|---------|
| 1  | 7071068 |      | 7193398 |      | 7313537 |      | 7431448 |      | 7547096 |
| 2  | 7073125 | 2057 | 7195418 | 2020 | 7315521 | 3    | 7433394 | 5    | 7549004 |
| 3  | 7075181 |      | 7197438 | 2019 | 7317504 | 2    | 7435339 | 5    | 7550911 |
| 4  | 7077236 |      | 7199457 |      | 7319486 | 2    | 7437284 | 5    | 7552818 |
| 5  | 7079291 |      | 7201476 |      | 7321468 | 1    | 7439229 | 4    | 7554724 |
| 6  | 7081345 |      | 7203494 |      | 7323449 | 1980 | 7441173 | 3    | 7556630 |
| 7  | 7083399 |      | 7205511 |      | 7325429 | 0    | 7443116 | 2    | 7558535 |
| 8  | 7085452 |      | 7207527 |      | 7327409 | 1979 | 7445058 | 2    | 7560439 |
| 9  | 7087504 |      | 7209543 |      | 7329388 | 9    | 7447000 | 1    | 7562343 |
| 10 | 7089556 |      | 7211559 |      | 7331367 | 8    | 7448941 | 1    | 7564246 |
| 11 | 7091607 |      | 7213574 |      | 7333345 | 7    | 7450882 | 1940 | 7566148 |
| 12 | 7093658 | 2050 | 7215588 |      | 7335322 | 6    | 7452822 | 1939 | 7568050 |
| 13 | 7095708 | 2049 | 7217601 |      | 7337298 | 6    | 7454761 | 8    | 7569951 |
| 14 | 7097757 |      | 7219614 |      | 7339274 | 6    | 7456699 | 8    | 7571851 |
| 15 | 7099806 |      | 7221627 |      | 7341250 | 5    | 7458637 | 7    | 7573751 |
| 16 | 7101854 |      | 7223639 |      | 7343225 | 4    | 7460574 | 7    | 7575650 |
| 17 | 7103902 |      | 7225651 |      | 7345199 | 4    | 7462511 | 6    | 7577548 |
| 18 | 7105949 |      | 7227662 | 2010 | 7347173 | 3    | 7464447 | 5    | 7579446 |
| 19 | 7107995 |      | 7229672 | 2009 | 7349146 | 2    | 7466382 | 5    | 7581343 |
| 20 | 7110041 |      | 7231681 |      | 7351118 | 2    | 7468317 | 4    | 7583240 |
| 21 | 7112086 |      | 7233689 |      | 7353090 | 1    | 7470251 | 3    | 7585136 |
| 22 | 7114131 |      | 7235697 |      | 7355061 | 0    | 7472184 | 3    | 7587031 |
| 23 | 7116175 |      | 7237704 |      | 7357031 | 1970 | 7474117 | 2    | 7588925 |
| 24 | 7118218 |      | 7239711 |      | 7359001 | 1969 | 7476049 | 2    | 7590819 |
| 25 | 7120261 |      | 7241718 |      | 7360970 | 9    | 7477981 | 1    | 7592713 |
| 26 | 7122303 |      | 7243724 |      | 7362939 | 8    | 7479912 | 1930 | 7594606 |
| 27 | 7124344 |      | 7245729 |      | 7364907 | 7    | 7481842 | 1929 | 7596498 |
| 28 | 7126385 | 2040 | 7247733 |      | 7366874 | 7    | 7483771 | 9    | 7598389 |
| 29 | 7128425 |      | 7249737 |      | 7368841 | 6    | 7485700 | 9    | 7600280 |
| 30 | 7130465 | 2039 | 7251741 |      | 7370807 | 6    | 7487629 | 8    | 7602170 |
| 31 | 7132504 |      | 7253744 |      | 7372773 | 5    | 7489557 | 7    | 7604060 |
| 32 |         |      |         |      |         |      |         | 1889 |         |
| 44 |         | 43   |         | 42   |         | 41   |         | 40   |         |



# RECTARVM IN CIRCULO SVBTENSARVM. 124

| 45 |         | 46   |         | 47   |         | 48   |         | 49   |         |         |
|----|---------|------|---------|------|---------|------|---------|------|---------|---------|
| 31 | 7134545 | 2038 | 7255746 | 1    | 7374738 | 4    | 7491484 | 6    | 7605949 | 8 29    |
| 32 | 713658  | 7    | 727747  | 1    | 7376702 | 4    | 7493410 | 6    | 7607837 | 8 28    |
| 33 | 7138618 | 7    | 7299748 | 1    | 7378666 | 3    | 7495336 | 6    | 7609725 | 7 27    |
| 34 | 7140655 | 6    | 7261749 | 100  | 7380629 | 3    | 7497262 | 5    | 7611611 | 6 26    |
| 35 | 7142691 | 6    | 7263719 | 1999 | 7382592 | 2    | 7499187 | 4    | 7613498 | 6 25    |
| 36 | 7144727 | 5    | 7265748 | 8    | 7384554 | 1    | 7501111 | 3    | 7615384 | 5 24    |
| 37 | 7146762 | 4    | 7267746 | 8    | 7386515 | 1900 | 7503034 | 3    | 7617269 | 4 23    |
| 38 | 7148796 | 4    | 7269744 | 7    | 7388475 | 0    | 7504957 | 2    | 7619153 | 4 22    |
| 39 | 7150830 | 3    | 7271741 | 6    | 7390435 | 1959 | 7506879 | 2    | 7621037 | 3 21    |
| 40 | 7152863 | 2    | 7273737 | 6    | 7392394 | 9    | 7508801 | 1    | 7622920 | 2 20    |
| 41 | 7154895 | 2    | 7275733 | 5    | 7394353 | 8    | 7510722 | 1920 | 7624802 | 1 19    |
| 42 | 7156927 | 1    | 7277728 | 4    | 7396311 | 7    | 7512642 | 1919 | 7626683 | 1 18    |
| 43 | 7158958 | 1    | 7279722 | 4    | 7398268 | 7    | 7514561 | 9    | 7628564 | 1 17    |
| 44 | 7160989 | 0    | 7281716 | 4    | 7400225 | 6    | 7516480 | 8    | 7630445 | 1880 16 |
| 45 | 7160319 | 2030 | 7283710 | 3    | 7402181 | 6    | 7518398 | 8    | 7632325 | 1879 15 |
| 46 | 7165049 | 1029 | 7285703 | 2    | 7404137 | 5    | 7520316 | 7    | 7634204 | 8 14    |
| 47 | 7167078 | 8    | 7287695 | 2    | 7406092 | 4    | 7522233 | 6    | 7636082 | 8 13    |
| 48 | 7169106 | 8    | 7289687 | 1    | 7408046 | 4    | 7524149 | 6    | 7637960 | 8 12    |
| 49 | 7171134 | 7    | 7291678 | 1990 | 7410000 | 3    | 7526065 | 5    | 7639838 | 7 11    |
| 50 | 7173161 | 6    | 7293668 | 0    | 7411953 | 2    | 7527980 | 4    | 7641715 | 6 10    |
| 51 | 7175187 | 6    | 7295658 | 1989 | 7413905 | 1    | 7529894 | 4    | 7643591 | 5 9     |
| 52 | 7177213 | 5    | 7297647 | 8    | 7415856 | 1    | 7531808 | 3    | 7645466 | 5 8     |
| 53 | 7179238 | 5    | 7299635 | 8    | 7417807 | 1    | 7533721 | 3    | 7647341 | 4 7     |
| 54 | 7181263 | 4    | 7301623 | 7    | 7419758 | 1950 | 7535634 | 2    | 7649215 | 3 6     |
| 55 | 7183287 | 3    | 7303610 | 7    | 7421708 | 1949 | 7537546 | 1    | 7651088 | 3 5     |
| 56 | 7185310 | 3    | 7305597 | 6    | 7423657 | 8    | 7539457 | 0    | 7652961 | 2 4     |
| 57 | 7187333 | 2    | 7307583 | 5    | 7425605 | 8    | 7541367 | 0    | 7654833 | 1 3     |
| 58 | 7189355 | 2    | 7309568 | 5    | 7427553 | 8    | 7543277 | 1910 | 7656704 | 1 2     |
| 59 | 7191377 | 1    | 7311553 | 4    | 7429501 | 7    | 7545187 | 1909 | 7658575 | 1870 1  |
| 60 | 7193398 | 0    | 7313537 | 4    | 7431448 | 8    | 7547096 | 8    | 7660445 | 1869 0  |
| 44 |         | 43   |         | 42   |         | 41   |         | 40   |         |         |



# CANON SIN VVM VEL SEMISSIVM

|    | 50      |      | 51      |      | 52      |      | 53      |      | 54      |      |
|----|---------|------|---------|------|---------|------|---------|------|---------|------|
|    | 7660445 |      | 7771460 |      | 7880108 |      | 7986355 |      | 8090170 |      |
| 1  | 7662314 | 1869 | 7773290 | 1830 | 7881898 | 1790 | 7988105 | 1750 | 8091879 | 60   |
| 2  | 7664183 | 8    | 7775120 | 1829 | 7883688 | 1789 | 7989855 | 1749 | 8093588 | 8    |
| 3  | 7666051 | 8    | 7776949 | 8    | 7885477 | 9    | 7991604 | 8    | 8095296 | 8    |
| 4  | 7667919 | 7    | 7778777 | 8    | 7887266 | 8    | 7993352 | 8    | 8097004 | 8    |
| 5  | 7669786 | 6    | 7780605 | 7    | 7889054 | 7    | 7995100 | 7    | 8098711 | 7    |
| 6  | 7671652 | 5    | 7782432 | 6    | 7890841 | 6    | 7996847 | 6    | 8100417 | 6    |
| 7  | 7673517 | 5    | 7784258 | 6    | 7892627 | 6    | 7998593 | 6    | 8102122 | 5    |
| 8  | 7675382 | 4    | 7786084 | 5    | 7894413 | 5    | 8000339 | 5    | 8104827 | 5    |
| 9  | 7677246 | 4    | 7787909 | 4    | 7896198 | 5    | 8002084 | 4    | 8105531 | 4    |
| 10 | 7679110 | 3    | 7789733 | 4    | 7897983 | 4    | 8003828 | 3    | 8107234 | 3    |
| 11 | 7680973 | 2    | 7791557 | 3    | 7809767 | 3    | 8005571 | 3    | 8108936 | 2    |
| 12 | 7682835 | 2    | 7793380 | 2    | 7901550 | 2    | 8007314 | 2    | 8110638 | 2    |
| 13 | 7684687 | 1    | 7795202 | 2    | 7903332 | 2    | 8009056 | 1    | 8112339 | 1    |
| 14 | 7686558 | 1860 | 7797024 | 1    | 7905114 | 1    | 8010797 | 1    | 8114040 | 1700 |
| 15 | 7688418 | 0    | 7798845 | 1820 | 7906895 | 1    | 8012538 | 1740 | 8115740 | 1699 |
| 16 | 7690278 | 1859 | 7800665 | 0    | 7908676 | 1780 | 8014278 | 1739 | 8117439 | 8    |
| 17 | 7692137 | 9    | 7802485 | 1819 | 7910456 | 1779 | 8016017 | 9    | 8119137 | 8    |
| 18 | 7693995 | 8    | 7804304 | 9    | 7912235 | 9    | 8017756 | 8    | 8120835 | 8    |
| 19 | 7695853 | 8    | 7806123 | 8    | 7914014 | 8    | 8019494 | 8    | 8122532 | 7    |
| 20 | 7697710 | 7    | 7807941 | 7    | 7915792 | 7    | 8021232 | 7    | 8124229 | 7    |
| 21 | 7699566 | 6    | 7809758 | 6    | 7917569 | 6    | 8022969 | 6    | 8125925 | 6    |
| 22 | 7701422 | 5    | 7812574 | 6    | 7919345 | 6    | 8024705 | 5    | 8127620 | 5    |
| 23 | 7703277 | 5    | 7813390 | 5    | 7921121 | 5    | 8026440 | 5    | 8129314 | 4    |
| 24 | 7705132 | 4    | 7815205 | 5    | 7922896 | 5    | 8028175 | 4    | 8131008 | 4    |
| 25 | 7706986 | 3    | 7817020 | 4    | 7924671 | 4    | 8029909 | 3    | 8132701 | 3    |
| 26 | 7708839 | 3    | 7818834 | 3    | 7926445 | 3    | 8031642 | 3    | 8134393 | 2    |
| 27 | 7710692 | 2    | 7820647 | 2    | 7928218 | 2    | 8033375 | 2    | 8136084 | 1    |
| 28 | 7712544 | 1    | 7822459 | 2    | 7929990 | 2    | 8035107 | 1    | 8137775 | 1    |
| 29 | 7714395 | 1    | 7824271 | 1    | 7931762 | 1    | 8036838 | 1    | 8139465 | 1690 |
| 30 | 7716246 | 1850 | 7826082 | 1810 | 7933533 | 1770 | 8038569 | 1730 | 8141155 | 1689 |
|    | 39      |      | 38      |      | 37      |      | 36      |      | 35      |      |



# RECTARVM IN CIRCULO SVBTENSARVM<sup>125</sup>

|    | 50      |      | 51      |      | 52      |      | 53      |      | 54      |      |    |
|----|---------|------|---------|------|---------|------|---------|------|---------|------|----|
| 31 | 7718096 | 1849 | 7827892 | 1810 | 7935303 | 1770 | 8040299 | 1729 | 8142844 | 8    | 29 |
| 32 | 7719945 | 9    | 7829702 | 1809 | 7937073 | 1769 | 8042028 | 9    | 8144532 | 8    | 28 |
| 33 | 7721794 | 8    | 7831511 | 9    | 7938842 | 8    | 8043757 | 8    | 8146220 | 7    | 27 |
| 34 | 7723642 | 8    | 7833320 | 8    | 7940611 | 8    | 8045485 | 7    | 8147907 | 6    | 26 |
| 35 | 7725490 | 7    | 7835128 | 7    | 7942379 | 7    | 8047212 | 6    | 8149593 | 5    | 25 |
| 36 | 7727337 | 6    | 7836935 | 6    | 7944146 | 6    | 8048938 | 6    | 8151278 | 5    | 24 |
| 37 | 7729183 | 5    | 7838741 | 6    | 7945912 | 6    | 8050664 | 5    | 8152963 | 4    | 23 |
| 38 | 7731028 | 4    | 7840547 | 5    | 7947678 | 5    | 8052389 | 5    | 8154647 | 3    | 22 |
| 39 | 7732872 | 4    | 7842352 | 5    | 7949443 | 5    | 8054114 | 4    | 8156330 | 3    | 21 |
| 40 | 7734716 | 3    | 7844157 | 4    | 7951208 | 4    | 8055838 | 3    | 8158013 | 2    | 20 |
| 41 | 7736559 | 3    | 7845961 | 3    | 7952972 | 3    | 8057561 | 2    | 8159695 | 1    | 19 |
| 42 | 7738402 | 2    | 7847764 | 2    | 7954735 | 2    | 8059283 | 2    | 8161376 | 1    | 18 |
| 43 | 7740244 | 1    | 7849566 | 2    | 7956497 | 2    | 8061005 | 1    | 8163057 | 1680 | 17 |
| 44 | 7742085 | 1    | 7851368 | 1    | 7958259 | 1    | 8062726 | 1720 | 8164737 | 1679 | 16 |
| 45 | 7743926 | 1840 | 7853169 | 1    | 7960020 | 0    | 8064446 | 0    | 8166416 | 8    | 15 |
| 46 | 7745766 | 0    | 7854970 | 1800 | 7961780 | 1760 | 8066166 | 1719 | 8168094 | 8    | 14 |
| 47 | 7747606 | 1839 | 7856770 | 1799 | 7963540 | 1759 | 8067885 | 8    | 8169772 | 7    | 13 |
| 48 | 7749445 | 8    | 7858569 | 9    | 7965299 | 8    | 8069603 | 8    | 8171449 | 7    | 12 |
| 49 | 7751283 | 8    | 7860368 | 8    | 7967057 | 8    | 8071321 | 7    | 8173126 | 6    | 11 |
| 50 | 7753121 | 7    | 7862166 | 7    | 7968815 | 7    | 8073038 | 6    | 8174802 | 5    | 10 |
| 51 | 7754958 | 6    | 7863963 | 6    | 7970572 | 6    | 8074754 | 6    | 8176477 | 4    | 9  |
| 52 | 7756794 | 6    | 7865759 | 6    | 7972328 | 6    | 8076470 | 5    | 8178151 | 4    | 8  |
| 53 | 7758630 | 5    | 7867555 | 5    | 7974084 | 4    | 8078185 | 4    | 8179825 | 3    | 7  |
| 54 | 7760465 | 4    | 7869350 | 5    | 7975838 | 5    | 8079899 | 4    | 8181498 | 2    | 6  |
| 55 | 7762299 | 3    | 7871145 | 4    | 7977593 | 4    | 8081613 | 3    | 8183170 | 1    | 5  |
| 56 | 7764132 | 3    | 7872939 | 3    | 7979347 | 3    | 8083326 | 2    | 8184841 | 1    | 4  |
| 57 | 7765965 | 2    | 7874732 | 3    | 7981100 | 2    | 8085038 | 1    | 8186512 | 1670 | 3  |
| 58 | 7767797 | 2    | 7876525 | 2    | 7982852 | 2    | 8086749 | 1    | 8188182 | 1669 | 2  |
| 59 | 7769629 | 1    | 7878317 | 1    | 7984604 | 1    | 8088460 | 1710 | 8189851 | 9    | 1  |
| 60 | 7771460 | 1830 | 7880108 | 1790 | 7986355 | 1750 | 8090170 | 1709 | 8191520 | 8    | 0  |
|    | 39      |      | 38      |      | 37      |      | 36      |      | 35      |      |    |



# CANON SIN VVM VEL SEMISSIVM

| 55 |         | 56   |         | 57   |         | 58   |         | 59   |         |
|----|---------|------|---------|------|---------|------|---------|------|---------|
|    | 8191520 |      | 8290376 |      | 8386706 |      | 8480481 |      | 8571673 |
| 1  | 8193188 | 1667 | 8292002 | 6    | 8388290 | 3    | 8482022 | 1540 | 8573171 |
| 2  | 8194855 | 7    | 8293628 | 5    | 8389873 | 3    | 8483562 | 0    | 8574668 |
| 3  | 8196522 | 6    | 8295253 | 4    | 8391456 | 2    | 8485102 | 1539 | 8576164 |
| 4  | 8198188 | 6    | 8296877 | 4    | 8393038 | 1    | 8486641 | 9    | 8577660 |
| 5  | 8199854 | 5    | 8298501 | 3    | 8394619 | 1580 | 8488180 | 8    | 8579155 |
| 6  | 8201519 | 4    | 8300127 | 2    | 8396199 | 1579 | 8489718 | 7    | 8580649 |
| 7  | 8203183 | 3    | 8301746 | 1    | 8397778 | 9    | 8491255 | 7    | 8582142 |
| 8  | 8204846 | 2    | 8303367 | 1620 | 8399357 | 8    | 8492791 | 5    | 8583635 |
| 9  | 8206508 | 2    | 8304987 | 0    | 8400935 | 8    | 8494326 | 4    | 8585127 |
| 10 | 8208170 | 1    | 8306607 | 1619 | 8402513 | 7    | 8495860 | 4    | 8586619 |
| 11 | 8209831 | 1660 | 8308226 | 8    | 8404090 | 6    | 8497394 | 3    | 8588110 |
| 12 | 8211491 | 0    | 8309844 | 8    | 8405666 | 5    | 8498927 | 2    | 8589600 |
| 13 | 8213151 | 1659 | 8311462 | 7    | 8407241 | 5    | 8500459 | 2    | 8591089 |
| 14 | 8214810 | 9    | 8313079 | 7    | 8418816 | 4    | 8501991 | 1    | 8592577 |
| 15 | 8216469 | 8    | 8314696 | 8    | 8410390 | 3    | 8503522 | 1530 | 8594064 |
| 16 | 8219127 | 7    | 8316312 | 5    | 8411963 | 3    | 8505052 | 0    | 8595551 |
| 17 | 8219784 | 6    | 8317927 | 4    | 8413536 | 2    | 8506582 | 1529 | 8597037 |
| 18 | 8221440 | 6    | 8319541 | 4    | 8415108 | 1    | 8508111 | 8    | 8598523 |
| 19 | 8223096 | 5    | 8321155 | 3    | 8416679 | 1    | 8509639 | 8    | 8600008 |
| 20 | 8224751 | 4    | 8322768 | 2    | 8418250 | 1570 | 8511167 | 7    | 8601492 |
| 21 | 8226495 | 3    | 8324380 | 1    | 8419820 | 1569 | 8512694 | 6    | 8602975 |
| 22 | 8228058 | 3    | 8325991 | 1    | 8421389 | 8    | 8514220 | 5    | 8604457 |
| 23 | 8229711 | 1    | 8327602 | 1610 | 8422957 | 8    | 8515745 | 5    | 8605939 |
| 24 | 8231363 | 2    | 8329212 | 0    | 8424525 | 7    | 8517270 | 4    | 8607420 |
| 25 | 8233015 | 1    | 8330822 | 1609 | 8426092 | 6    | 8518794 | 3    | 8608901 |
| 26 | 8234666 | 1650 | 8332431 | 8    | 8427658 | 5    | 8520317 | 2    | 8610381 |
| 27 | 8236316 | 1649 | 8334039 | 7    | 8429223 | 5    | 8521839 | 2    | 8611860 |
| 28 | 8237965 | 9    | 8335646 | 6    | 8430788 | 4    | 8523361 | 1    | 8613338 |
| 29 | 8239614 | 8    | 8337252 | 6    | 8432352 | 3    | 8524882 | 1520 | 8614815 |
| 30 | 8241262 | 7    | 8338858 | 5    | 8433915 | 3    | 8526402 | 1519 | 8616292 |
| 34 |         | 33   |         | 32   |         | 31   |         | 30   |         |



# RECTARVM IN CIRCULO SVBTENSARVM 126

| 55 |         | 56   |         | 57   |         | 58   |         | 59   |         |         |
|----|---------|------|---------|------|---------|------|---------|------|---------|---------|
| 31 | 8242909 | 7    | 8340463 | 4    | 8435477 | 2    | 8527921 | 1519 | 8617768 | 1475 29 |
| 32 | 8244556 | 6    | 8342067 | 4    | 8437039 | 1    | 8529440 | 8    | 8619243 | 5 28    |
| 33 | 8246202 | 5    | 8343671 | 3    | 8438609 | 1    | 8530958 | 8    | 8620718 | 4 27    |
| 34 | 8247847 | 5    | 8345274 | 3    | 8440161 | 1560 | 8532476 | 7    | 8622192 | 3 26    |
| 35 | 8249492 | 4    | 8346877 | 2    | 8441721 | 1559 | 8533993 | 6    | 8623665 | 2 25    |
| 36 | 8251136 | 3    | 8348479 | 1    | 8443280 | 8    | 8535509 | 5    | 8625137 | 1 24    |
| 37 | 8252779 | 2    | 8350080 | 1600 | 8444838 | 8    | 8537024 | 4    | 8626608 | 1 23    |
| 38 | 8254421 | 1    | 8351680 | 9    | 8446396 | 7    | 8538538 | 4    | 8628079 | 1470 22 |
| 39 | 8256062 | 1    | 8353279 | 1599 | 8447953 | 6    | 8540052 | 3    | 8629549 | 0 21    |
| 40 | 8257703 | 1640 | 8354878 | 8    | 8449509 | 5    | 8541565 | 2    | 8631019 | 1469 20 |
| 41 | 8259343 | 1639 | 8356476 | 7    | 8451064 | 4    | 8543077 | 1    | 8632488 | 8 19    |
| 42 | 8260981 | 9    | 8358073 | 7    | 8452618 | 4    | 8544588 | 1    | 8633956 | 7 18    |
| 43 | 8262621 | 8    | 8359670 | 6    | 8454172 | 3    | 8546099 | 0    | 8635423 | 6 17    |
| 44 | 8264259 | 8    | 8361266 | 6    | 8455725 | 3    | 8547609 | 1510 | 8636889 | 6 16    |
| 45 | 8265897 | 7    | 8362862 | 5    | 8457278 | 2    | 8549119 | 1509 | 8638355 | 5 15    |
| 46 | 8267534 | 6    | 8364457 | 4    | 8458830 | 1    | 8550628 | 8    | 8639820 | 4 14    |
| 47 | 8269170 | 6    | 8366051 | 3    | 8460381 | 1    | 8552136 | 7    | 8641284 | 4 13    |
| 48 | 8270806 | 5    | 8367644 | 2    | 8461932 | 1550 | 8553641 | 6    | 8642748 | 3 12    |
| 49 | 8272441 | 4    | 8369236 | 2    | 8463482 | 1549 | 8555149 | 6    | 8644211 | 2 11    |
| 50 | 8274075 | 3    | 8370828 | 1    | 8465031 | 8    | 8556655 | 5    | 8645673 | 1 10    |
| 51 | 8275708 | 2    | 8372419 | 1590 | 8466579 | 7    | 8558160 | 4    | 8647134 | 1 9     |
| 52 | 8277340 | 2    | 8374009 | 0    | 8468126 | 7    | 8559664 | 4    | 8648595 | 1460 8  |
| 53 | 8278972 | 1    | 8375599 | 1589 | 8469673 | 6    | 8561168 | 3    | 8650055 | 1459 7  |
| 54 | 8280603 | 1    | 8377188 | 8    | 8471219 | 6    | 8562671 | 2    | 8651514 | 9 6     |
| 55 | 8282234 | 1630 | 8378776 | 7    | 8472765 | 5    | 8564173 | 2    | 8652973 | 8 5     |
| 56 | 8283864 | 1629 | 8380363 | 7    | 8474310 | 4    | 8565675 | 1    | 8654431 | 7 4     |
| 57 | 8285493 | 8    | 8381950 | 6    | 8475854 | 3    | 8567176 | 1500 | 8655888 | 6 3     |
| 58 | 8287121 | 8    | 8383536 | 5    | 8477397 | 2    | 8568676 | 1499 | 8657344 | 5 2     |
| 59 | 8288749 | 7    | 8385121 | 5    | 8478939 | 2    | 8570175 | 8    | 8658799 | 5 1     |
| 60 | 8290376 | 6    | 8386706 | 4    | 8480481 | 1    | 8571673 | 8    | 8660254 | 4 0     |
| 34 |         | 33   |         | 32   |         | 31   |         | 30   |         |         |



# CANON SIN V V M V E L S E M I S S I V M

|    | 60      |      | 61      |      | 62      |      | 63      |      | 64      |        |
|----|---------|------|---------|------|---------|------|---------|------|---------|--------|
|    | 8660254 |      | 8746197 |      | 8829476 |      | 8910065 |      | 8987940 |        |
| 1  | 8661708 | 1454 | 8747607 | 1409 | 8830841 | 4    | 8911385 | 1319 | 8989215 | 460    |
| 2  | 8663162 | 3    | 8749016 | 9    | 8832205 | 4    | 8912704 | 9    | 8990489 | 459    |
| 3  | 8664615 | 2    | 8750425 | 8    | 8833569 | 3    | 8914023 | 8    | 8991762 | 358    |
| 4  | 8666067 | 1    | 8751833 | 7    | 8834932 | 3    | 8915341 | 8    | 8993035 | 357    |
| 5  | 8667518 | 1450 | 8753240 | 6    | 8836295 | 2    | 8916659 | 7    | 8994307 | 256    |
| 6  | 8668968 | 1449 | 8754646 | 5    | 8837657 | 1    | 8917976 | 7    | 8995578 | 155    |
| 7  | 8670417 | 9    | 8756051 | 5    | 8839018 | 1360 | 8919292 | 5    | 8996848 | 127054 |
| 8  | 8671866 | 8    | 8757456 | 4    | 8840378 | 1359 | 8920607 | 4    | 8998117 | 126953 |
| 9  | 8673314 | 8    | 8758860 | 3    | 8841737 | 8    | 8921921 | 3    | 8999386 | 952    |
| 10 | 8674762 | 7    | 8760263 | 2    | 8843095 | 7    | 8923234 | 2    | 9000654 | 851    |
| 11 | 8676209 | 6    | 8761665 | 2    | 8844452 | 7    | 8924546 | 2    | 9001921 | 750    |
| 12 | 8677655 | 5    | 8763067 | 1    | 8845809 | 6    | 8925858 | 1    | 9003187 | 649    |
| 13 | 8679100 | 4    | 8764468 | 1400 | 8847165 | 6    | 8927169 | 1310 | 9004453 | 648    |
| 14 | 8680544 | 4    | 8765868 | 0    | 8848521 | 5    | 8928479 | 0    | 9005718 | 547    |
| 15 | 8681988 | 3    | 8767268 | 1399 | 8849876 | 4    | 8929789 | 1309 | 9006982 | 446    |
| 16 | 8683431 | 3    | 8768667 | 8    | 8851230 | 3    | 8931098 | 8    | 9008245 | 345    |
| 17 | 8684874 | 2    | 8770065 | 7    | 8852583 | 3    | 8932406 | 8    | 9009508 | 344    |
| 18 | 8686316 | 1    | 8771462 | 7    | 8852936 | 2    | 8933714 | 7    | 9010770 | 243    |
| 19 | 8687757 | 1440 | 8772859 | 6    | 8855288 | 1    | 8935021 | 6    | 9012031 | 142    |
| 20 | 8689197 | 1439 | 8774255 | 5    | 8856639 | 1350 | 8936327 | 5    | 9013292 | 141    |
| 21 | 8690636 | 8    | 8775650 | 4    | 8857989 | 1349 | 8937632 | 4    | 9014552 | 126040 |
| 22 | 8692074 | 8    | 8777044 | 3    | 8859338 | 9    | 8938936 | 4    | 9015811 | 125939 |
| 23 | 8693512 | 7    | 8778437 | 3    | 8860687 | 8    | 8940240 | 3    | 9017069 | 838    |
| 24 | 8694949 | 7    | 8779830 | 2    | 8862035 | 8    | 8941543 | 2    | 9018326 | 737    |
| 25 | 8696386 | 6    | 8781222 | 1    | 8863383 | 7    | 8942845 | 1    | 9019584 | 836    |
| 26 | 8697822 | 5    | 8782613 | 1390 | 8864730 | 6    | 8944146 | 1300 | 9020838 | 635    |
| 27 | 8699257 | 4    | 8784003 | 0    | 8866076 | 5    | 8945446 | 0    | 9022093 | 534    |
| 28 | 8700691 | 3    | 8785393 | 1389 | 8867421 | 4    | 8946746 | 1299 | 9023347 | 433    |
| 29 | 8702124 | 3    | 8786782 | 9    | 8868765 | 3    | 8948045 | 9    | 9024600 | 332    |
| 30 | 8703557 | 2    | 8788111 | 8    | 8870108 | 3    | 8949344 | 8    | 9025853 | 331    |
|    | 29      |      | 28      |      | 27      |      | 26      |      | 25      | 230    |



# RECTARVM IN CIRCULO SVBTENSARVM. 127

|    | 60      |      | 61      |      | 62      |      | 63      |      | 64      |      |    |
|----|---------|------|---------|------|---------|------|---------|------|---------|------|----|
| 31 | 8704989 | 1    | 8789559 | 7    | 8871451 | 2    | 8950642 | 7    | 9027105 | 1    | 29 |
| 32 | 8706420 | 1    | 8790946 | 6    | 8872793 | 1    | 8951939 | 6    | 9028356 | 1250 | 28 |
| 33 | 8707851 | 1430 | 8792332 | 5    | 8874134 | 1    | 8953235 | 5    | 9029606 | 0    | 27 |
| 34 | 8709281 | 1439 | 8793717 | 5    | 8875475 | 1340 | 8954530 | 4    | 9030856 | 1249 | 26 |
| 35 | 8710710 | 8    | 8795102 | 4    | 8876815 | 1339 | 8955824 | 3    | 9032105 | 8    | 25 |
| 36 | 8712138 | 7    | 8796486 | 3    | 8878154 | 8    | 8957117 | 3    | 9033353 | 7    | 24 |
| 37 | 8713565 | 7    | 8797869 | 2    | 8879492 | 8    | 8958410 | 2    | 9034600 | 7    | 23 |
| 38 | 8714992 | 6    | 8799251 | 2    | 8880830 | 7    | 8959702 | 2    | 9035847 | 6    | 22 |
| 39 | 8716418 | 6    | 8800633 | 1    | 8882167 | 6    | 8960994 | 1    | 9037093 | 5    | 21 |
| 40 | 8717844 | 5    | 8802014 | 1380 | 8883503 | 5    | 8962285 | 1290 | 9038338 | 4    | 20 |
| 41 | 8719269 | 4    | 8803394 | 1379 | 8884838 | 4    | 8963575 | 1289 | 9039582 | 3    | 19 |
| 42 | 8720693 | 3    | 8804773 | 8    | 8886172 | 4    | 8964864 | 8    | 9040825 | 3    | 18 |
| 43 | 8722116 | 2    | 8806152 | 8    | 8887506 | 3    | 8966152 | 8    | 9042068 | 2    | 17 |
| 44 | 8723538 | 2    | 8807530 | 7    | 8888839 | 2    | 8967440 | 7    | 9043310 | 1    | 16 |
| 45 | 8724960 | 1    | 8808907 | 6    | 8890171 | 1    | 8968727 | 6    | 9044551 | 1240 | 15 |
| 46 | 8726381 | 1420 | 8810283 | 6    | 8891502 | 1    | 8970013 | 6    | 9045791 | 0    | 14 |
| 47 | 8727801 | 0    | 8811659 | 5    | 8892833 | 1330 | 8971299 | 5    | 9047031 | 1239 | 13 |
| 48 | 8729221 | 1419 | 8813034 | 4    | 8894163 | 1329 | 8972584 | 4    | 9048270 | 8    | 12 |
| 49 | 8730640 | 8    | 8814408 | 3    | 8895492 | 9    | 8973868 | 3    | 9049508 | 8    | 11 |
| 50 | 8732058 | 7    | 8815783 | 2    | 8896821 | 8    | 8975151 | 2    | 9050746 | 7    | 10 |
| 51 | 8733475 | 6    | 8817155 | 2    | 8898149 | 7    | 8976433 | 2    | 9051983 | 6    | 9  |
| 52 | 8734891 | 6    | 8818527 | 1    | 8899476 | 6    | 8977715 | 1    | 9053219 | 5    | 8  |
| 53 | 8736307 | 5    | 8819898 | 1370 | 8900802 | 5    | 8978996 | 1280 | 9054454 | 4    | 7  |
| 54 | 8737722 | 5    | 8821268 | 0    | 8902127 | 5    | 8980276 | 1279 | 9055688 | 4    | 6  |
| 55 | 8739137 | 4    | 8822638 | 1369 | 8903452 | 4    | 8981555 | 8    | 9056922 | 3    | 5  |
| 56 | 8740551 | 3    | 8824007 | 8    | 8904776 | 3    | 8982833 | 8    | 9058155 | 2    | 4  |
| 57 | 8741964 | 2    | 8825375 | 8    | 8906099 | 3    | 8984111 | 7    | 9059387 | 1    | 3  |
| 58 | 8743376 | 1    | 8826743 | 7    | 8907422 | 2    | 8985388 | 6    | 9060618 | 1230 | 2  |
| 59 | 8744787 | 1410 | 8828110 | 6    | 8908744 | 1    | 8986664 | 6    | 9061848 | 0    | 1  |
| 60 | 8746197 | 0    | 8829476 | 5    | 8910065 | 1320 | 8987940 | 5    | 9063078 | 1229 | 0  |
|    | 29      |      | 28      |      | 27      |      | 26      |      | 25      |      |    |



# CANON SIN VVM VEL SEMISSIVM

|    | 65      |      | 66      |      | 67      |      | 68      |      | 69      |    |
|----|---------|------|---------|------|---------|------|---------|------|---------|----|
|    | 9063078 |      | 9135455 |      | 9205050 |      | 9271839 |      | 9339804 |    |
| 1  | 9064307 | 1228 | 9136638 | 2    | 9206185 | 5    | 9272928 | 9    | 9336846 | 60 |
| 2  | 9065535 | 8    | 9137820 | 1    | 9207321 | 5    | 9274017 | 8    | 9337887 | 59 |
| 3  | 9066763 | 7    | 9139001 | 0    | 9208456 | 4    | 9275105 | 7    | 9338928 | 58 |
| 4  | 9067990 | 6    | 9140181 | 1180 | 9209590 | 3    | 9276192 | 6    | 9339960 | 57 |
| 5  | 9069216 | 5    | 9141361 | 1179 | 9210723 | 2    | 9277278 | 5    | 9341007 | 56 |
| 6  | 9070441 | 4    | 9142540 | 8    | 9211855 | 1    | 9278363 | 5    | 9342045 | 55 |
| 7  | 9071665 | 4    | 9143718 | 7    | 9212986 | 1    | 9279448 | 4    | 9343084 | 54 |
| 8  | 9072889 | 3    | 9144895 | 7    | 9214117 | 1130 | 9280532 | 3    | 9344119 | 53 |
| 9  | 9074112 | 2    | 9146072 | 6    | 9215247 | 1129 | 9281615 | 2    | 9345155 | 52 |
| 10 | 9075334 | 1    | 9147248 | 5    | 9216376 | 8    | 9282697 | 1    | 9346190 | 51 |
| 11 | 9076555 | 0    | 9148423 | 4    | 9217504 | 7    | 9283778 | 1    | 9347224 | 50 |
| 12 | 9077775 | 1220 | 9149597 | 3    | 9218631 | 7    | 9284859 | 1080 | 9348257 | 49 |
| 13 | 9078995 | 1219 | 9150770 | 3    | 9219758 | 6    | 9285939 | 1079 | 9349289 | 48 |
| 14 | 9080214 | 8    | 9151943 | 2    | 9220884 | 6    | 9287018 | 8    | 9350321 | 47 |
| 15 | 9081432 | 8    | 9153115 | 1    | 9222010 | 5    | 9288096 | 7    | 9351352 | 46 |
| 16 | 9082649 | 7    | 9154286 | 1    | 9223135 | 4    | 9289173 | 7    | 9352382 | 45 |
| 17 | 9083866 | 6    | 9155457 | 1170 | 9224259 | 3    | 9290250 | 6    | 9353411 | 44 |
| 18 | 9085082 | 5    | 9156627 | 1169 | 9225384 | 2    | 9291326 | 5    | 9354440 | 43 |
| 19 | 9086297 | 5    | 9157796 | 8    | 9226504 | 1    | 9292401 | 5    | 9355468 | 42 |
| 20 | 9087512 | 4    | 9158964 | 7    | 9227625 | 1    | 9293476 | 4    | 9356495 | 41 |
| 21 | 9088726 | 3    | 9160131 | 6    | 9228746 | 1120 | 9294550 | 3    | 9357521 | 40 |
| 22 | 9089939 | 2    | 9161297 | 6    | 9229866 | 1119 | 9295623 | 2    | 9358546 | 39 |
| 23 | 9091151 | 1    | 9162463 | 5    | 9230985 | 8    | 9296695 | 1    | 9359571 | 38 |
| 24 | 9092362 | 1210 | 9163628 | 4    | 9232103 | 7    | 9297766 | 1070 | 9360595 | 37 |
| 25 | 9093572 | 1209 | 9164792 | 3    | 9233220 | 7    | 9298836 | 1069 | 9361618 | 36 |
| 26 | 9094781 | 9    | 9165955 | 2    | 9234337 | 6    | 9299905 | 9    | 9362640 | 35 |
| 27 | 9095990 | 8    | 9167117 | 2    | 9235453 | 5    | 9300974 | 8    | 9363662 | 34 |
| 28 | 9097198 | 8    | 9168279 | 1    | 9236568 | 4    | 9302042 | 7    | 9364683 | 33 |
| 29 | 9098406 | 7    | 9169440 | 1    | 9237682 | 3    | 9303109 | 7    | 9365703 | 32 |
| 30 | 9099613 | 6    | 9170601 | 1160 | 9238795 | 3    | 9304176 | 6    | 9366722 | 31 |
|    | 24      |      | 23      |      | 22      |      | 21      |      | 20      |    |



# RECTARVM IN CIRCULO SVBTENSARVM. 128

| 65 |         | 66   |         | 67   |         | 68   |         | 69   |         |         |
|----|---------|------|---------|------|---------|------|---------|------|---------|---------|
| 1  | 9100819 | 5    | 9171761 | 1159 | 9239908 | 2    | 9305242 | 5    | 9367740 | 8 29    |
| 2  | 9102024 | 4    | 9172920 | 8    | 9241010 | 1    | 9306307 | 4    | 9368758 | 7 28    |
| 3  | 9103228 | 4    | 9174078 | 7    | 9242131 | 1    | 9307371 | 3    | 9369775 | 6 27    |
| 4  | 9104432 | 3    | 9175235 | 6    | 9243241 | 1110 | 9308434 | 3    | 9370791 | 5 26    |
| 5  | 9105635 | 2    | 9176391 | 6    | 9244352 | 1109 | 9309497 | 2    | 9371806 | 4 25    |
| 6  | 9106837 | 1    | 9177547 | 5    | 9245461 | 8    | 9310559 | 1    | 9372820 | 4 24    |
| 7  | 9108038 | 0    | 9178702 | 4    | 9246569 | 7    | 9311620 | 1060 | 9373834 | 3 23    |
| 8  | 9109238 | 1200 | 9179856 | 3    | 9247676 | 6    | 9312680 | 1059 | 9374847 | 2 22    |
| 9  | 9110438 | 1199 | 9181009 | 2    | 9248782 | 6    | 9313739 | 9    | 9375859 | 1 21    |
| 0  | 9111637 | 8    | 9182161 | 2    | 9249888 | 5    | 9314798 | 8    | 9376870 | 1010 20 |
| 1  | 9112835 | 7    | 9183313 | 1    | 9250993 | 4    | 9315856 | 7    | 9377880 | 1009 19 |
| 2  | 9114032 | 7    | 9184464 | 1150 | 9252097 | 3    | 9316913 | 6    | 9378889 | 9 18    |
| 3  | 9115229 | 6    | 9185614 | 1149 | 9253200 | 3    | 9317969 | 5    | 9379898 | 8 17    |
| 4  | 9116425 | 5    | 9186763 | 9    | 9254303 | 2    | 9319024 | 5    | 9380906 | 7 16    |
| 5  | 9117620 | 4    | 9187912 | 8    | 9255405 | 1    | 9320079 | 4    | 9381913 | 6 15    |
| 6  | 9118814 | 3    | 9189060 | 7    | 9256506 | 0    | 9321133 | 3    | 9382919 | 6 14    |
| 7  | 9120007 | 3    | 9190207 | 6    | 9257606 | 1100 | 9322186 | 2    | 9383925 | 5 13    |
| 8  | 9121200 | 2    | 9191353 | 6    | 9258706 | 1099 | 9323238 | 2    | 9384930 | 4 12    |
| 9  | 9122392 | 2    | 9192499 | 5    | 9259805 | 8    | 9324290 | 1    | 9385934 | 3 11    |
| 0  | 9123584 | 1    | 9193644 | 4    | 9260903 | 7    | 9325341 | 1050 | 9386937 | 2 10    |
| 1  | 9124775 | 1190 | 9194788 | 3    | 9262000 | 6    | 9326391 | 1049 | 9387939 | 2 9     |
| 2  | 9125965 | 1189 | 9195931 | 2    | 9263096 | 6    | 9327440 | 8    | 9388941 | 1 8     |
| 3  | 9127154 | 8    | 9197073 | 2    | 9264192 | 5    | 9328488 | 7    | 9389942 | 1000 7  |
| 4  | 9128342 | 7    | 9198215 | 1    | 9265287 | 4    | 9329535 | 7    | 9390942 | 999 6   |
| 5  | 9129529 | 7    | 9199356 | 1140 | 9266381 | 3    | 9330582 | 6    | 9391941 | 9 5     |
| 6  | 9130716 | 8    | 9200496 | 1139 | 9267474 | 2    | 9331628 | 5    | 9392940 | 8 4     |
| 7  | 9131902 | 5    | 9201635 | 9    | 9268566 | 2    | 9332673 | 4    | 9393938 | 7 3     |
| 8  | 9133087 | 4    | 9202774 | 8    | 9269658 | 1    | 9333717 | 4    | 9394935 | 6 2     |
| 9  | 9134271 | 4    | 9203912 | 7    | 9270749 | 1090 | 9334761 | 3    | 9395931 | 5 1     |
| 0  | 9135455 | 3    | 9205049 | 5    | 9271839 | 1089 | 9335804 | 2    | 9396926 | 7 0     |
| 24 |         | 23   |         | 22   |         | 21   |         | 20   |         |         |



# CANON SIN VVM VEL SEMISSIVM

| 70 |         | 71  |         | 72 |         | 73 |         | 74  |         |
|----|---------|-----|---------|----|---------|----|---------|-----|---------|
| 1  | 9396926 | 994 | 9455186 | 6  | 9510565 | 8  | 9563048 | 849 | 9612617 |
| 2  | 9397921 | 3   | 9456133 | 5  | 9511464 | 7  | 9563898 | 9   | 9613418 |
| 3  | 9398915 | 2   | 9457079 | 4  | 9512362 | 6  | 9564747 | 8   | 9614219 |
| 4  | 9399908 | 1   | 9458024 | 3  | 9513259 | 5  | 9565596 | 7   | 9615019 |
| 5  | 9400900 | 990 | 9458968 | 2  | 9514155 | 4  | 9566444 | 6   | 9615818 |
| 6  | 9401891 | 989 | 9459911 | 1  | 9515050 | 3  | 9567291 | 5   | 9616616 |
| 7  | 9402882 | 8   | 9460854 | 9  | 9515944 | 2  | 9568137 | 4   | 9617413 |
| 8  | 9403872 | 7   | 9461796 | 8  | 9516838 | 1  | 9568982 | 3   | 9618209 |
| 9  | 9404861 | 6   | 9462737 | 0  | 9517731 | 9  | 9569826 | 2   | 9619005 |
| 10 | 9405849 | 5   | 9463677 | 8  | 9518623 | 8  | 9570670 | 1   | 9619800 |
| 11 | 9406836 | 4   | 9464616 | 7  | 9519514 | 7  | 9571513 | 0   | 9620694 |
| 12 | 9407822 | 3   | 9465555 | 6  | 9520404 | 6  | 9572355 | 9   | 9621387 |
| 13 | 9408808 | 2   | 9466493 | 5  | 9521294 | 5  | 9573196 | 8   | 9622179 |
| 14 | 9409793 | 1   | 9467430 | 4  | 9522183 | 4  | 9574036 | 7   | 9622971 |
| 15 | 9410777 | 0   | 9468366 | 3  | 9523071 | 3  | 9574875 | 6   | 9623762 |
| 16 | 9411760 | 9   | 9469301 | 2  | 9523958 | 2  | 9575714 | 5   | 9624552 |
| 17 | 9412742 | 8   | 9470236 | 1  | 9524844 | 1  | 9576552 | 4   | 9625341 |
| 18 | 9413724 | 7   | 9471170 | 0  | 9525730 | 0  | 9577389 | 3   | 9626129 |
| 19 | 9414705 | 6   | 9472103 | 9  | 9526615 | 9  | 9578225 | 2   | 9626917 |
| 20 | 9415685 | 5   | 9473035 | 8  | 9527499 | 8  | 9579061 | 1   | 9627704 |
| 21 | 9416665 | 4   | 9473967 | 7  | 9528382 | 7  | 9579896 | 0   | 9628490 |
| 22 | 9417644 | 3   | 9474898 | 6  | 9529264 | 6  | 9580730 | 9   | 9629275 |
| 23 | 9418622 | 2   | 9475828 | 5  | 9530146 | 5  | 9581563 | 8   | 9630059 |
| 24 | 9419599 | 1   | 9476757 | 4  | 9531027 | 4  | 9582395 | 7   | 9630843 |
| 25 | 9420575 | 0   | 9477685 | 3  | 9531907 | 3  | 9583226 | 6   | 9631626 |
| 26 | 9421550 | 9   | 9478612 | 2  | 9532786 | 2  | 9584057 | 5   | 9632408 |
| 27 | 9422525 | 8   | 9479539 | 1  | 9533664 | 1  | 9584887 | 4   | 9633189 |
| 28 | 9423499 | 7   | 9480465 | 0  | 9534541 | 0  | 9585716 | 3   | 9633969 |
| 29 | 9424472 | 6   | 9481390 | 9  | 9535418 | 9  | 9586544 | 2   | 9634748 |
| 30 | 9425444 | 5   | 9482314 | 8  | 9536294 | 8  | 9587371 | 1   | 9635527 |
| 31 | 9426415 | 4   | 9483237 | 7  | 9537169 | 7  | 9588197 | 0   | 9636305 |
| 19 |         | 18  |         | 17 |         | 16 |         | 15  |         |



# RECTARVM IN CIRCULO SVBTENSARVM. <sup>129</sup>

|    | 70      |     | 71      |     | 72      |     | 73      |     | 74      |     |    |
|----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|----|
| 31 | 9427386 | 970 | 9484160 | 2   | 9538043 | 4   | 9589023 | 5   | 9637082 | 6   | 19 |
| 32 | 9428256 | 969 | 9485082 | 1   | 9538917 | 3   | 9589848 | 4   | 9637858 | 5   | 28 |
| 33 | 9429325 | 8   | 9486003 | 920 | 9539790 | 2   | 9590672 | 3   | 9638633 | 5   | 27 |
| 34 | 9430293 | 7   | 9486923 | 919 | 9540662 | 1   | 959149  | 3   | 9639408 | 4   | 26 |
| 35 | 9431260 | 7   | 9487842 | 9   | 9541533 | 870 | 9592318 | 2   | 9640182 | 3   | 25 |
| 36 | 9432227 | 6   | 9488761 | 8   | 9542403 | 869 | 9593140 | 1   | 9640955 | 2   | 24 |
| 37 | 9433193 | 5   | 9489679 | 7   | 9543272 | 9   | 9593961 | 820 | 9641727 | 1   | 23 |
| 38 | 9434158 | 4   | 9490596 | 6   | 9544141 | 8   | 9594781 | 819 | 9642498 | 0   | 22 |
| 39 | 9435122 | 3   | 9491512 | 5   | 9545009 | 7   | 9595600 | 9   | 9643268 | 770 | 21 |
| 40 | 9436085 | 3   | 9492427 | 4   | 9545876 | 6   | 9596419 | 8   | 9644038 | 769 | 20 |
| 41 | 9437048 | 2   | 9493341 | 4   | 9546742 | 5   | 9597237 | 7   | 9644807 | 8   | 19 |
| 42 | 9438010 | 1   | 9494255 | 3   | 9547607 | 5   | 9598054 | 6   | 9645575 | 7   | 18 |
| 43 | 9438971 | 960 | 9495168 | 2   | 9548472 | 4   | 9598870 | 5   | 9646342 | 6   | 17 |
| 44 | 9439931 | 959 | 9496080 | 1   | 9549336 | 3   | 9599685 | 4   | 9647108 | 5   | 16 |
| 45 | 9440890 | 9   | 9496991 | 1   | 9550199 | 2   | 9600499 | 4   | 9647873 | 5   | 15 |
| 46 | 9441849 | 8   | 9497902 | 910 | 9551061 | 1   | 9601313 | 3   | 9648638 | 4   | 14 |
| 47 | 9442807 | 7   | 9498812 | 909 | 9551922 | 1   | 9602126 | 2   | 9649402 | 3   | 13 |
| 48 | 9443764 | 7   | 9499721 | 8   | 9552781 | 860 | 9602938 | 1   | 9650165 | 2   | 12 |
| 49 | 9444720 | 6   | 9500629 | 7   | 9553643 | 859 | 9603749 | 810 | 9650927 | 2   | 11 |
| 50 | 9445676 | 5   | 9501536 | 7   | 9554502 | 8   | 9604559 | 809 | 9651689 | 1   | 10 |
| 51 | 9446631 | 4   | 9502443 | 6   | 9555360 | 7   | 9605368 | 9   | 9652450 | 760 | 9  |
| 52 | 9447585 | 3   | 9503349 | 5   | 9556217 | 7   | 9606177 | 8   | 9653210 | 759 | 8  |
| 53 | 9448538 | 2   | 9504254 | 4   | 9557074 | 6   | 9606985 | 7   | 9653969 | 8   | 7  |
| 54 | 9449490 | 1   | 9505158 | 3   | 9557930 | 5   | 9607792 | 6   | 9654727 | 7   | 6  |
| 55 | 9450441 | 1   | 9506061 | 2   | 9558785 | 4   | 9608598 | 5   | 9655484 | 6   | 5  |
| 56 | 9451392 | 950 | 9506963 | 2   | 9559639 | 3   | 9609403 | 5   | 9656240 | 6   | 4  |
| 57 | 9452342 | 949 | 9507865 | 1   | 9560492 | 3   | 9610208 | 4   | 9656996 | 5   | 3  |
| 58 | 9453291 | 8   | 9508766 | 900 | 9561345 | 2   | 9611012 | 3   | 9657751 | 4   | 2  |
| 59 | 9454239 | 7   | 9509666 | 899 | 9562197 | 1   | 9611815 | 2   | 9658505 | 3   | 1  |
| 60 | 9455186 | 7   | 9510565 | 9   | 9563048 | 850 | 9612617 | 1   | 9659258 | 3   | 0  |
|    | 19      |     | 18      |     | 17      |     | 16      |     | 15      |     |    |



# CANON SIN VVM VEL SEMISSIVM

|    | 75      |     | 76        |     | 77        |     | 78        |     | 79        |        |
|----|---------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|--------|
| 1  | 9659258 |     | 2 9702957 |     | 3 9743700 |     | 3 9781476 |     | 4 9816272 |        |
|    | 9660011 |     | 2 9703660 |     | 3 9744355 |     | 3 9782080 |     | 4 9816827 | 60     |
| 2  | 9660763 |     | 1 9704363 |     | 2 9745008 |     | 2 9782684 |     | 3 9817381 | 4 59   |
| 3  | 9661514 | 750 | 9705065   |     | 1 9745660 |     | 2 9783287 |     | 2 9817934 | 3 58   |
| 4  | 9662264 | 749 | 9705766   | 700 | 9746312   |     | 1 9783889 |     | 1 9818486 | 2 57   |
| 5  | 9663013 |     | 8 9706466 | 699 | 9746963   | 650 | 9784490   | 600 | 9819037   | 1 56   |
| 6  | 9663761 |     | 7 9707165 |     | 8 9747613 | 649 | 9785090   | 599 | 9819587   | 550 55 |
| 7  | 9664508 |     | 7 9707863 |     | 8 9748262 |     | 8 9785689 |     | 9 9820137 | 0 54   |
| 8  | 9665255 |     | 6 9708561 |     | 7 9748910 |     | 7 9786288 |     | 8 9820686 | 549 53 |
| 9  | 9666001 |     | 5 9709258 |     | 6 9749557 |     | 6 9786886 |     | 7 9821234 | 8 52   |
| 10 | 9666746 |     | 4 9709954 |     | 5 9750203 |     | 6 9787483 |     | 6 9821781 | 7 51   |
| 11 | 9667490 |     | 3 9710649 |     | 4 9750849 |     | 5 9788079 |     | 5 9822227 | 6 50   |
| 12 | 9668233 |     | 3 9711343 |     | 3 9751494 |     | 4 9788674 |     | 4 9822872 | 5 49   |
| 13 | 9668976 |     | 2 9712036 |     | 3 9752138 |     | 3 9789268 |     | 4 9823417 | 4 48   |
| 14 | 9669718 |     | 1 9712729 |     | 2 9752781 |     | 2 9789862 |     | 3 9823961 | 4 47   |
| 15 | 9670459 | 740 | 9713421   |     | 1 9753423 |     | 2 9790455 |     | 2 9824504 | 3 46   |
| 16 | 9679199 | 739 | 9714112   | 690 | 9754065   |     | 1 9791047 |     | 1 9825046 | 2 45   |
| 17 | 9671938 |     | 9 9714802 | 689 | 9754706   | 640 | 9791638   |     | 0 9825587 | 1 44   |
| 18 | 9672677 |     | 8 9715491 |     | 9 9755346 | 639 | 9792228   | 590 | 9826128   | 1 43   |
| 19 | 9673415 |     | 7 9716180 |     | 8 9755985 |     | 8 9792818 | 589 | 9826668   | 540 42 |
| 20 | 9674152 |     | 6 9716868 |     | 7 9756623 |     | 7 9793407 |     | 8 9827207 | 539 41 |
| 21 | 9674888 |     | 5 9717555 |     | 6 9757260 |     | 7 9793995 |     | 7 9827745 | 8 40   |
| 22 | 9675623 |     | 4 9718241 |     | 5 9757897 |     | 6 9794582 |     | 6 9828282 | 7 39   |
| 23 | 9676357 |     | 4 9718926 |     | 4 9758533 |     | 5 9795168 |     | 5 9828818 | 6 38   |
| 24 | 9677091 |     | 3 9719610 |     | 4 9759168 |     | 4 9795753 |     | 4 9829354 | 6 37   |
| 25 | 9677824 |     | 2 9720294 |     | 3 9759802 |     | 3 9796337 |     | 4 9829889 | 5 36   |
| 26 | 9678556 |     | 1 9720977 |     | 2 9760435 |     | 2 9796921 |     | 3 9830423 | 4 35   |
| 27 | 9679287 | 730 | 9721659   |     | 1 9761067 |     | 2 9797504 |     | 2 9830956 | 3 34   |
| 28 | 9680017 |     | 0 9722340 | 680 | 9761699   |     | 1 9798086 |     | 1 9831488 | 2 33   |
| 29 | 9680747 | 729 | 9723020   | 679 | 9762330   | 630 | 9798667   |     | 0 9832019 | 1 32   |
| 30 | 9681476 |     | 8 9723699 |     | 9 9762960 | 629 | 9799247   | 580 | 9832549   | 0 31   |
|    | I4      |     | I3        |     | I2        |     | II        |     | IO        | 530 30 |



# RECTARVM IN CIRCULO SVBTENSARVM<sup>130</sup>

|    | 75      |     | 76      |     | 77      |     | 78      |     | 79      |     |    |
|----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|----|
| 1  | 9682204 | 7   | 9724378 | 8   | 9763589 | 8   | 9799827 | 579 | 9833079 | 529 | 29 |
| 2  | 9682931 | 6   | 9725056 | 7   | 9764217 | 8   | 9800406 | 8   | 9833608 | 8   | 28 |
| 3  | 9683657 | 6   | 9725733 | 6   | 9764845 | 7   | 9800984 | 7   | 9834136 | 7   | 27 |
| 4  | 9684383 | 5   | 9726409 | 6   | 9765472 | 6   | 9801561 | 6   | 9834663 | 6   | 26 |
| 5  | 9685108 | 4   | 9727085 | 5   | 9766098 | 5   | 9802137 | 5   | 9835189 | 5   | 25 |
| 6  | 9685832 | 3   | 9727760 | 4   | 9766723 | 4   | 9802712 | 5   | 9835714 | 5   | 24 |
| 7  | 9686555 | 2   | 9728434 | 3   | 9767347 | 3   | 9803287 | 4   | 9836239 | 4   | 23 |
| 8  | 9687277 | 1   | 9729107 | 2   | 9767970 | 3   | 9803861 | 3   | 9836763 | 3   | 22 |
| 9  | 9687998 | 1   | 9729779 | 1   | 9768593 | 2   | 9804434 | 2   | 9837286 | 2   | 21 |
| 10 | 9688719 | 720 | 9730450 | 670 | 9769215 | 1   | 9805006 | 1   | 9837808 | 1   | 20 |
| 11 | 9689439 | 719 | 9731120 | 669 | 9769836 | 620 | 9805577 | 570 | 9838329 | 1   | 19 |
| 12 | 9690158 | 8   | 9731789 | 9   | 9770456 | 619 | 9806147 | 569 | 9838850 | 520 | 18 |
| 13 | 9690876 | 7   | 9732458 | 8   | 9771075 | 8   | 9806716 | 9   | 9839370 | 519 | 17 |
| 14 | 9691593 | 6   | 9733126 | 7   | 9771693 | 8   | 9807285 | 8   | 9839889 | 8   | 16 |
| 15 | 9692309 | 6   | 9733793 | 6   | 9772311 | 7   | 9807853 | 7   | 9840407 | 7   | 15 |
| 16 | 9693025 | 5   | 9734459 | 5   | 9772928 | 6   | 9808420 | 6   | 9840924 | 6   | 14 |
| 17 | 9693740 | 4   | 9735124 | 5   | 9773544 | 5   | 9808986 | 5   | 9841440 | 6   | 13 |
| 18 | 9694454 | 3   | 9735789 | 4   | 9774159 | 4   | 9809551 | 5   | 9841956 | 5   | 12 |
| 19 | 9695167 | 2   | 9736453 | 3   | 9774773 | 4   | 9810116 | 4   | 9842471 | 4   | 11 |
| 20 | 9695879 | 1   | 9737116 | 2   | 9775387 | 3   | 9810680 | 3   | 9842985 | 3   | 10 |
| 21 | 9696590 | 1   | 9737778 | 1   | 9776000 | 2   | 9811243 | 2   | 9843498 | 2   | 9  |
| 22 | 9697301 | 710 | 9738439 | 660 | 9776612 | 1   | 9811805 | 1   | 9844010 | 1   | 8  |
| 23 | 9698011 | 709 | 9739099 | 0   | 9777223 | 610 | 9812366 | 0   | 9844521 | 1   | 7  |
| 24 | 9698720 | 8   | 9739759 | 659 | 9777833 | 609 | 9812926 | 560 | 9845032 | 510 | 6  |
| 25 | 9699428 | 7   | 9740418 | 8   | 9778442 | 8   | 9813486 | 559 | 9845542 | 509 | 5  |
| 26 | 9700135 | 7   | 9741076 | 7   | 9779050 | 8   | 9814045 | 8   | 9846051 | 8   | 4  |
| 27 | 9700842 | 6   | 9741733 | 6   | 9779658 | 7   | 9814603 | 7   | 9846559 | 7   | 3  |
| 28 | 9701548 | 5   | 9742389 | 6   | 9780265 | 6   | 9815160 | 6   | 9847066 | 6   | 2  |
| 29 | 9702253 | 4   | 9743045 | 5   | 9780871 | 5   | 9815716 | 6   | 9847572 | 6   | 1  |
| 30 | 9702957 | 3   | 9743700 | 5   | 9781476 | 4   | 9816272 | 5   | 9848078 | 5   | 0  |
|    | I4      |     | I3      |     | I2      |     | II      |     | Io      |     |    |



# CANON SIN V V M V E L S E M I S S I V M

|    | 80      |     | 81      |     | 82      |     | 83      |     | 84      |        |
|----|---------|-----|---------|-----|---------|-----|---------|-----|---------|--------|
|    | 9848078 |     | 9876883 |     | 9902681 |     | 9925461 |     | 9945219 |        |
| 1  | 9848583 | 4   | 9877338 | 4   | 9903085 | 4   | 9925816 | 3   | 9945523 | 60     |
| 2  | 9849087 | 3   | 9877792 | 3   | 9903489 | 3   | 9926169 | 2   | 9945826 | 3 59   |
| 3  | 9849590 | 2   | 9878245 | 2   | 9903892 | 2   | 9926521 | 2   | 9946128 | 2 58   |
| 4  | 9850092 | 1   | 9878697 | 1   | 9904294 | 1   | 9926873 | 1   | 9946429 | 1 57   |
| 5  | 9850593 | 0   | 9879148 | 0   | 9904695 | 400 | 9927224 | 350 | 9946729 | 300 56 |
| 6  | 9851093 | 500 | 9879598 | 450 | 9905095 | 399 | 9927574 | 349 | 9947028 | 299 55 |
| 7  | 9851593 | 499 | 9880048 | 449 | 9905494 | 9   | 9927923 | 8   | 9947327 | 9 54   |
| 8  | 9852092 | 8   | 9880497 | 8   | 9905893 | 8   | 9928271 | 7   | 9947625 | 8 53   |
| 9  | 9852590 | 7   | 9880945 | 7   | 9906291 | 7   | 9928618 | 7   | 9947922 | 7 52   |
| 10 | 9853087 | 6   | 9881392 | 6   | 9906688 | 6   | 9928965 | 6   | 9948218 | 6 51   |
| 11 | 9853583 | 6   | 9881838 | 5   | 9907084 | 5   | 9929311 | 5   | 9948513 | 5 50   |
| 12 | 9854079 | 5   | 9882283 | 5   | 9907479 | 4   | 9929656 | 4   | 9948807 | 4 49   |
| 13 | 9854574 | 4   | 9882728 | 4   | 9907873 | 3   | 9930000 | 3   | 9949100 | 3 48   |
| 14 | 9855068 | 3   | 9883172 | 3   | 9908266 | 3   | 9930343 | 2   | 9949393 | 3 47   |
| 15 | 9855561 | 2   | 9883615 | 2   | 9908659 | 2   | 9930685 | 1   | 9949685 | 2 46   |
| 16 | 9856053 | 1   | 9884057 | 1   | 9909051 | 1   | 9931028 | 1   | 9949976 | 1 45   |
| 17 | 9856544 | 1   | 9884498 | 0   | 9909442 | 390 | 9931367 | 340 | 9950266 | 290 44 |
| 18 | 9857035 | 490 | 9884938 | 440 | 9909832 | 389 | 9931707 | 339 | 9950555 | 289 43 |
| 19 | 9857525 | 489 | 9885378 | 439 | 9910221 | 9   | 9932046 | 8   | 9950844 | 9 42   |
| 20 | 9858014 | 8   | 9885817 | 8   | 9910610 | 8   | 9932384 | 7   | 9951132 | 8 41   |
| 21 | 9858502 | 7   | 9886255 | 7   | 9910998 | 7   | 9932721 | 6   | 9951419 | 7 40   |
| 22 | 9858989 | 6   | 9886692 | 6   | 9911385 | 6   | 9933057 | 6   | 9951705 | 6 39   |
| 23 | 9859475 | 6   | 9887128 | 6   | 9911771 | 5   | 9933393 | 5   | 9951990 | 5 38   |
| 24 | 9859961 | 5   | 9887564 | 5   | 9912156 | 4   | 9933728 | 4   | 9952274 | 4 37   |
| 25 | 9860446 | 4   | 9887999 | 4   | 9912540 | 3   | 9934062 | 3   | 9952557 | 3 36   |
| 26 | 9860930 | 3   | 9888433 | 3   | 9912923 | 3   | 9934395 | 2   | 9952840 | 3 35   |
| 27 | 9861413 | 2   | 9888866 | 2   | 9913306 | 2   | 9934727 | 1   | 9953122 | 2 34   |
| 28 | 9861895 | 1   | 9889298 | 1   | 9913688 | 1   | 9935058 | 1   | 9953403 | 1 33   |
| 29 | 9862376 | 0   | 9889729 | 430 | 9914069 | 380 | 9935389 | 330 | 9953683 | 280 32 |
| 30 | 9862856 | 480 | 9890159 | 429 | 9914449 | 379 | 9935719 | 329 | 9953962 | 279 31 |
|    | 9       |     | 8       |     | 7       |     | 6       |     | 5       |        |



# RECTARVM IN CIRCULO SVBTENSARVM 131

|    | 80      |     | 81      |     | 82      |     | 83      |     | 84      |        |
|----|---------|-----|---------|-----|---------|-----|---------|-----|---------|--------|
| 31 | 9863336 | 479 | 9890588 | 9   | 9914828 | 8   | 9936048 | 8   | 9954240 | 8 29   |
| 32 | 9863815 | 8   | 9891017 | 8   | 9915206 | 8   | 9936376 | 7   | 9954518 | 7 18   |
| 33 | 9864293 | 7   | 9891445 | 7   | 9915584 | 7   | 9936703 | 6   | 9954795 | 6 17   |
| 34 | 9864770 | 6   | 9891872 | 6   | 9915961 | 6   | 9937029 | 6   | 9955071 | 5 26   |
| 35 | 9865246 | 6   | 9892298 | 5   | 9916337 | 5   | 9937355 | 5   | 9955346 | 4 25   |
| 36 | 9865722 | 5   | 9892723 | 4   | 9916712 | 4   | 9937680 | 4   | 9955620 | 3 24   |
| 37 | 9866197 | 4   | 9893147 | 4   | 9917086 | 3   | 9938004 | 3   | 9955893 | 2 23   |
| 38 | 9866671 | 3   | 9893571 | 3   | 9917459 | 3   | 9938327 | 2   | 9956165 | 2 22   |
| 39 | 9867144 | 2   | 9893994 | 2   | 9917832 | 2   | 9938649 | 1   | 9956437 | 1 21   |
| 40 | 9867616 | 1   | 9894416 | 1   | 9918204 | 1   | 9938970 | 320 | 9956708 | 270 20 |
| 41 | 9868087 | 0   | 9894837 | 0   | 9918575 | 370 | 9939290 | 319 | 9956978 | 269 19 |
| 42 | 9868557 | 470 | 9895257 | 420 | 9918945 | 369 | 9939609 | 9   | 9957247 | 8 18   |
| 43 | 9869027 | 469 | 9895677 | 419 | 9919314 | 8   | 9939928 | 8   | 9957515 | 7 17   |
| 44 | 9869496 | 8   | 9896096 | 8   | 9919682 | 7   | 9940246 | 7   | 9957782 | 7 16   |
| 45 | 9869964 | 7   | 9896514 | 7   | 9920049 | 7   | 9940563 | 6   | 9958049 | 6 15   |
| 46 | 9870431 | 6   | 9896931 | 6   | 9920416 | 6   | 9940879 | 5   | 9958315 | 5 14   |
| 47 | 9870897 | 5   | 9897347 | 5   | 9920782 | 5   | 9941194 | 5   | 9958580 | 4 13   |
| 48 | 9871362 | 5   | 9897762 | 5   | 9921147 | 4   | 9941509 | 4   | 9958844 | 3 12   |
| 49 | 9871827 | 4   | 9898177 | 4   | 9921511 | 3   | 9941823 | 3   | 9959107 | 3 11   |
| 50 | 9872291 | 3   | 9898591 | 3   | 9921874 | 2   | 9942136 | 2   | 9959370 | 2 10   |
| 51 | 9872754 | 2   | 9899004 | 2   | 9922236 | 2   | 9942448 | 1   | 9959632 | 1 9    |
| 52 | 9873216 | 1   | 9899416 | 1   | 9922598 | 1   | 9942759 | 310 | 9959893 | 260 8  |
| 53 | 9873677 | 0   | 9899827 | 410 | 9922959 | 360 | 9943069 | 0   | 9960153 | 259 7  |
| 54 | 9874137 | 460 | 9900237 | 409 | 9923319 | 359 | 9943379 | 309 | 9960412 | 8 6    |
| 55 | 9874597 | 459 | 9900646 | 9   | 9923678 | 8   | 9943688 | 8   | 9960670 | 7 5    |
| 56 | 9875056 | 8   | 9901055 | 8   | 9924036 | 7   | 9943996 | 7   | 9960927 | 6 4    |
| 57 | 9875514 | 7   | 9901463 | 7   | 9924393 | 7   | 9944303 | 6   | 9961183 | 5 3    |
| 58 | 9875971 | 6   | 9901870 | 6   | 9924750 | 6   | 9944609 | 5   | 9961438 | 5 2    |
| 59 | 9876427 | 6   | 9902276 | 5   | 9925106 | 5   | 9944914 | 5   | 9961693 | 4 1    |
| 60 | 9876883 | 5   | 9902681 | 4   | 9925461 | 5   | 9945219 | 4   | 9961947 | 3 0    |
|    | 9       |     | 8       |     | 7       |     | 6       |     | 5       |        |



# CANON SIN VVM VEL SEMISSIVM

|    | 85      |     | 86      |     | 87      |     | 88      |     | 89      |    |
|----|---------|-----|---------|-----|---------|-----|---------|-----|---------|----|
|    | 9961947 |     | 9975640 |     | 9986295 |     | 9993908 |     | 9998477 |    |
| 1  | 9962200 | 2   | 9975843 | 2   | 9986447 | 1   | 9994009 | 100 | 9998527 | 60 |
| 2  | 9962452 | 1   | 9976045 | 1   | 9986598 | 150 | 9994109 | 99  | 9998576 | 49 |
| 3  | 9962703 | 1   | 9976246 | 200 | 9986748 | 149 | 9994208 | 9   | 9998625 | 59 |
| 4  | 9962954 | 250 | 9976446 | 199 | 9986897 | 8   | 9994307 | 8   | 9998673 | 8  |
| 5  | 9963204 | 249 | 9976645 | 8   | 9987045 | 8   | 9994405 | 7   | 9998720 | 56 |
| 6  | 9963453 | 8   | 9976843 | 7   | 9987193 | 7   | 9994502 | 6   | 9998766 | 55 |
| 7  | 9963701 | 7   | 9977040 | 7   | 9987340 | 6   | 9994598 | 5   | 9998811 | 54 |
| 8  | 9963948 | 6   | 9977237 | 6   | 9987486 | 5   | 9994693 | 4   | 9998855 | 53 |
| 9  | 9964194 | 6   | 9977433 | 5   | 9987631 | 4   | 9994787 | 4   | 9998899 | 52 |
| 10 | 9964440 | 5   | 9977628 | 4   | 9987775 | 3   | 9994881 | 3   | 9998942 | 51 |
| 11 | 9964685 | 4   | 9977822 | 3   | 9987918 | 3   | 9994974 | 2   | 9998984 | 50 |
| 12 | 9964929 | 3   | 9978015 | 2   | 9988061 | 2   | 9995066 | 1   | 9999025 | 49 |
| 13 | 9965172 | 2   | 9978207 | 1   | 9988203 | 1   | 9995157 | 90  | 9999065 | 48 |
| 14 | 9965414 | 1   | 9978398 | 1   | 9988344 | 140 | 9995247 | 89  | 9999104 | 47 |
| 15 | 9965655 | 0   | 9978589 | 190 | 9988484 | 139 | 9995336 | 8   | 9999143 | 46 |
| 16 | 9965895 | 240 | 9978779 | 189 | 9988623 | 8   | 9995424 | 8   | 9999181 | 45 |
| 17 | 9966135 | 239 | 9978968 | 8   | 9988761 | 8   | 9995512 | 7   | 9999218 | 44 |
| 18 | 9966374 | 8   | 9979156 | 7   | 9988899 | 7   | 9995599 | 6   | 9999254 | 43 |
| 19 | 9966612 | 7   | 9979343 | 7   | 9989036 | 6   | 9995685 | 5   | 9999289 | 42 |
| 20 | 9966849 | 6   | 9979530 | 6   | 9989172 | 5   | 9995770 | 4   | 9999323 | 41 |
| 21 | 9967085 | 5   | 9979716 | 5   | 9989307 | 4   | 9995854 | 3   | 9999356 | 40 |
| 22 | 9967320 | 5   | 9979901 | 4   | 9989441 | 3   | 9995937 | 2   | 9999389 | 39 |
| 23 | 9967555 | 4   | 9980085 | 3   | 9989574 | 2   | 9996019 | 2   | 9999421 | 38 |
| 24 | 9967789 | 3   | 9980268 | 2   | 9989706 | 1   | 9996101 | 1   | 9999452 | 37 |
| 25 | 9968022 | 2   | 9980450 | 1   | 9989837 | 1   | 9996182 | 80  | 9999482 | 36 |
| 26 | 9968254 | 1   | 9980631 | 180 | 9989968 | 130 | 9996262 | 79  | 9999511 | 35 |
| 27 | 9968485 | 230 | 9980811 | 0   | 9990098 | 129 | 9996341 | 8   | 9999539 | 34 |
| 28 | 9968715 | 229 | 9980991 | 179 | 9990227 | 8   | 9996419 | 7   | 9999566 | 33 |
| 29 | 9968944 | 9   | 9981170 | 8   | 9990355 | 7   | 9996496 | 7   | 9999593 | 32 |
| 30 | 9969173 | 8   | 9981348 | 7   | 9990482 | 6   | 9996573 | 6   | 9999619 | 31 |
|    | 4       |     | 3       |     | 2       |     | 1       |     | 0       |    |



# RECTARVM IN CIRCULO SVBTENSARVM. 132

|    | 85      |     | 86      |     | 87      |     | 88      |    | 89      |       |
|----|---------|-----|---------|-----|---------|-----|---------|----|---------|-------|
| 31 | 9969401 | 7   | 9981525 | 6   | 9990608 | 6   | 9996649 | 5  | 9999644 | 4 29  |
| 32 | 9969628 | 6   | 9981701 | 6   | 9990734 | 5   | 9996724 | 4  | 9999668 | 3 28  |
| 33 | 9969854 | 5   | 9981877 | 5   | 9990859 | 4   | 9996798 | 3  | 9999691 | 2 27  |
| 34 | 9970079 | 5   | 9982052 | 4   | 9990983 | 3   | 9996871 | 2  | 9999713 | 2 26  |
| 35 | 9970304 | 4   | 9982226 | 3   | 9991106 | 2   | 9996943 | 1  | 9999735 | 1 25  |
| 36 | 9970528 | 3   | 9982399 | 2   | 9991228 | 1   | 9997014 | 1  | 9999756 | 20 24 |
| 37 | 9970751 | 2   | 9982571 | 1   | 9991349 | 1   | 9997085 | 70 | 9999776 | 19 23 |
| 38 | 9970973 | 1   | 9982742 | 0   | 9991470 | 120 | 9997155 | 69 | 9999795 | 8 22  |
| 39 | 9971194 | 220 | 9982912 | 170 | 9991590 | 0   | 9997224 | 8  | 9999813 | 7 21  |
| 40 | 9971414 | 219 | 9983082 | 169 | 9991709 | 119 | 9997292 | 7  | 9999830 | 6 20  |
| 41 | 9971633 | 8   | 9983251 | 8   | 9991827 | 8   | 9997359 | 6  | 9999846 | 6 19  |
| 42 | 9971851 | 8   | 9983419 | 7   | 9991944 | 7   | 9997425 | 6  | 9999862 | 5 18  |
| 43 | 9972069 | 7   | 9983586 | 6   | 9992060 | 6   | 9997491 | 5  | 9999877 | 4 17  |
| 44 | 9972286 | 6   | 9983752 | 5   | 9992175 | 5   | 9997556 | 4  | 9999891 | 3 16  |
| 45 | 9972502 | 5   | 9983917 | 4   | 9992290 | 4   | 9997620 | 3  | 9999904 | 1 15  |
| 46 | 9972717 | 4   | 9984081 | 4   | 9992404 | 3   | 9997683 | 2  | 9999916 | 1 14  |
| 47 | 9972931 | 4   | 9984245 | 3   | 9992517 | 2   | 9997745 | 1  | 9999927 | 1 13  |
| 48 | 9973145 | 3   | 9984408 | 2   | 9992629 | 1   | 9997806 | 1  | 9999938 | 10 12 |
| 49 | 9973358 | 2   | 9984570 | 1   | 9992740 | 10  | 9997867 | 60 | 9999948 | 9 11  |
| 50 | 9973570 | 1   | 9984731 | 160 | 9992850 | 0   | 9997927 | 59 | 9999957 | 8 10  |
| 51 | 9973781 | 210 | 9984891 | 159 | 9992960 | 109 | 9997986 | 8  | 9999965 | 7 9   |
| 52 | 9973991 | 209 | 9985050 | 9   | 9993069 | 8   | 9998044 | 7  | 9999972 | 6 8   |
| 53 | 9974200 | 8   | 9985209 | 8   | 9993177 | 7   | 9998101 | 6  | 9999978 | 6 7   |
| 54 | 9974408 | 7   | 9985367 | 7   | 9993284 | 6   | 9998157 | 5  | 9999984 | 5 6   |
| 55 | 9974615 | 7   | 9985524 | 6   | 9993390 | 5   | 9998212 | 5  | 9999989 | 4 5   |
| 56 | 9974822 | 6   | 9985680 | 5   | 9993495 | 4   | 9998267 | 4  | 9999993 | 3 4   |
| 57 | 9975028 | 5   | 9985835 | 4   | 9993599 | 4   | 9998321 | 3  | 9999996 | 2 3   |
| 58 | 9975233 | 4   | 9985989 | 4   | 9993703 | 3   | 9998374 | 2  | 9999998 | 1 2   |
| 59 | 9975437 | 3   | 9986143 | 2   | 9993806 | 2   | 9998426 | 1  | 9999999 | 1 1   |
| 60 | 9975640 | 3   | 9986295 | 2   | 9993908 | 1   | 9998477 | 50 | 0000000 | 0 0   |
|    | 4       |     | 3       |     | 2       |     | I       |    | 0       |       |



**FINIS PRIMI**  
**LIBRI TABVLARVM**  
Directionum Erasmi  
Rheinholdi Sala  
ueldensi.



# SECUNDI LIBRI

CANONES SEQUUNTUR QUIDES

derantur in Tabulis Directionum clarissimi

Viri Iohannis Regiomontani

videlicet.

Ascensionum obliquarum a 60. gradibus ad  
finem quadrantis

Et positionum sub latitudinibus, 54. 57. 60. 63. 66.

RELIQVAE TABVLAE ASCEN-

sionum obliquarum usque ad quadrantem suppu-

tatae per Erasmum Rheinhol-

dum Salueldensem.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♄     |    | ♂     |    | ♂     |    | ♂     |    | ♂     |   | lip |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|---|-----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | / |     |
| 0  | 0     | 0  | 6     | 24 | 16    | 17 | 38    | 24 | 80    | 40 | 130   |   | 36  |
| 1  | 0     | 12 | 6     | 39 | 16    | 45 | 39    | 31 | 82    | 18 | 132   |   | 15  |
| 2  | 0     | 24 | 6     | 54 | 17    | 14 | 40    | 38 | 83    | 55 | 133   |   | 55  |
| 3  | 0     | 36 | 7     | 9  | 17    | 44 | 41    | 48 | 85    | 33 | 135   |   | 35  |
| 4  | 0     | 48 | 7     | 24 | 18    | 15 | 42    | 59 | 87    | 12 | 137   |   | 15  |
| 5  | 1     | 0  | 7     | 40 | 18    | 47 | 44    | 11 | 88    | 51 | 138   |   | 54  |
| 6  | 1     | 12 | 7     | 56 | 19    | 18 | 45    | 25 | 90    | 30 | 140   |   | 33  |
| 7  | 1     | 24 | 8     | 12 | 19    | 51 | 46    | 40 | 92    | 9  | 142   |   | 13  |
| 8  | 1     | 36 | 8     | 29 | 20    | 25 | 47    | 57 | 93    | 49 | 143   |   | 52  |
| 9  | 1     | 48 | 8     | 46 | 21    | 1  | 49    | 16 | 95    | 29 | 145   |   | 31  |
| 10 | 2     | 0  | 9     | 3  | 21    | 38 | 50    | 36 | 97    | 8  | 147   |   | 11  |
| 11 | 2     | 13 | 9     | 20 | 22    | 15 | 51    | 57 | 98    | 48 | 148   |   | 50  |
| 12 | 2     | 25 | 9     | 38 | 22    | 53 | 53    | 19 | 100   | 29 | 150   |   | 29  |
| 13 | 2     | 37 | 9     | 56 | 23    | 33 | 54    | 42 | 102   | 10 | 152   |   | 8   |
| 14 | 2     | 49 | 10    | 15 | 24    | 14 | 56    | 5  | 103   | 50 | 153   |   | 46  |
| 15 | 3     | 2  | 10    | 33 | 24    | 57 | 57    | 31 | 105   | 30 | 155   |   | 25  |
| 16 | 3     | 15 | 10    | 53 | 25    | 41 | 58    | 57 | 107   | 10 | 157   |   | 3   |
| 17 | 3     | 27 | 11    | 13 | 26    | 27 | 60    | 25 | 108   | 51 | 158   |   | 42  |
| 18 | 3     | 40 | 11    | 34 | 27    | 13 | 61    | 54 | 110   | 41 | 160   |   | 21  |
| 19 | 3     | 53 | 11    | 53 | 28    | 1  | 63    | 24 | 112   | 12 | 162   |   | 0   |
| 20 | 4     | 6  | 12    | 14 | 28    | 50 | 64    | 55 | 113   | 53 | 163   |   | 38  |
| 21 | 4     | 19 | 12    | 36 | 29    | 40 | 66    | 26 | 115   | 33 | 165   |   | 17  |
| 22 | 4     | 32 | 12    | 58 | 30    | 32 | 67    | 58 | 117   | 14 | 166   |   | 55  |
| 23 | 4     | 46 | 13    | 20 | 31    | 26 | 69    | 31 | 118   | 54 | 168   |   | 33  |
| 24 | 4     | 59 | 13    | 44 | 32    | 21 | 71    | 4  | 120   | 34 | 170   |   | 11  |
| 25 | 5     | 13 | 14    | 8  | 33    | 17 | 72    | 40 | 122   | 15 | 171   |   | 50  |
| 26 | 5     | 27 | 14    | 33 | 34    | 15 | 74    | 15 | 123   | 55 | 173   |   | 28  |
| 27 | 5     | 41 | 14    | 58 | 35    | 15 | 75    | 50 | 125   | 35 | 175   |   | 6   |
| 28 | 5     | 55 | 15    | 24 | 36    | 17 | 77    | 26 | 127   | 15 | 176   |   | 44  |
| 29 | 6     | 10 | 15    | 51 | 37    | 20 | 79    | 2  | 128   | 56 | 178   |   | 22  |
| 30 | 6     | 24 | 16    | 17 | 38    | 24 | 80    | 40 | 130   | 36 | 180   |   | 0   |



|    | h     |    | m     |    | h     |    | h     |    | h     |    | h     |    | h     |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. |
| 0  | 180   | 0  | 229   | 24 | 279   | 20 | 321   | 36 | 343   | 43 | 353   | 36 |       |
| 1  | 181   | 38 | 231   | 4  | 280   | 58 | 322   | 40 | 344   | 9  | 353   | 50 |       |
| 2  | 183   | 16 | 232   | 45 | 282   | 34 | 323   | 43 | 344   | 36 | 354   | 5  |       |
| 3  | 184   | 54 | 234   | 25 | 284   | 10 | 324   | 45 | 345   | 2  | 354   | 19 |       |
| 4  | 186   | 32 | 236   | 5  | 285   | 45 | 325   | 45 | 345   | 27 | 354   | 33 |       |
| 5  | 188   | 10 | 237   | 45 | 287   | 20 | 326   | 43 | 345   | 52 | 354   | 47 |       |
| 6  | 189   | 49 | 239   | 26 | 288   | 56 | 327   | 39 | 346   | 16 | 355   | 1  |       |
| 7  | 191   | 27 | 241   | 6  | 290   | 29 | 328   | 34 | 346   | 40 | 355   | 14 |       |
| 8  | 193   | 5  | 242   | 46 | 292   | 2  | 329   | 28 | 347   | 2  | 355   | 28 |       |
| 9  | 194   | 43 | 244   | 27 | 293   | 34 | 330   | 20 | 347   | 24 | 355   | 41 |       |
| 10 | 196   | 22 | 246   | 7  | 295   | 5  | 331   | 10 | 347   | 46 | 355   | 54 |       |
| 11 | 198   | 0  | 247   | 48 | 296   | 36 | 331   | 59 | 348   | 7  | 356   | 7  |       |
| 12 | 199   | 39 | 249   | 19 | 298   | 6  | 332   | 47 | 348   | 26 | 356   | 20 |       |
| 13 | 201   | 18 | 251   | 9  | 299   | 35 | 333   | 33 | 348   | 47 | 356   | 33 |       |
| 14 | 202   | 57 | 252   | 50 | 301   | 3  | 334   | 19 | 349   | 7  | 356   | 45 |       |
| 15 | 204   | 35 | 254   | 30 | 302   | 29 | 335   | 3  | 349   | 27 | 356   | 58 |       |
| 16 | 206   | 14 | 256   | 10 | 303   | 55 | 335   | 46 | 349   | 45 | 357   | 11 |       |
| 17 | 207   | 52 | 257   | 50 | 305   | 18 | 336   | 27 | 350   | 4  | 357   | 23 |       |
| 18 | 209   | 31 | 259   | 31 | 306   | 41 | 337   | 7  | 350   | 22 | 357   | 35 |       |
| 19 | 211   | 10 | 261   | 12 | 308   | 3  | 337   | 45 | 350   | 40 | 357   | 47 |       |
| 20 | 212   | 49 | 262   | 52 | 309   | 24 | 338   | 22 | 350   | 57 | 358   | 0  |       |
| 21 | 214   | 29 | 264   | 31 | 310   | 44 | 338   | 59 | 351   | 14 | 358   | 12 |       |
| 22 | 216   | 8  | 266   | 11 | 312   | 3  | 339   | 35 | 351   | 31 | 358   | 24 |       |
| 23 | 217   | 47 | 267   | 51 | 313   | 20 | 340   | 9  | 351   | 48 | 358   | 36 |       |
| 24 | 219   | 27 | 269   | 30 | 314   | 35 | 340   | 42 | 352   | 4  | 358   | 48 |       |
| 25 | 221   | 6  | 271   | 9  | 315   | 49 | 341   | 13 | 352   | 20 | 359   | 0  |       |
| 26 | 222   | 45 | 272   | 48 | 317   | 1  | 341   | 45 | 352   | 36 | 359   | 12 |       |
| 27 | 224   | 25 | 274   | 27 | 318   | 12 | 342   | 16 | 352   | 51 | 359   | 24 |       |
| 28 | 226   | 5  | 276   | 5  | 319   | 22 | 342   | 46 | 353   | 6  | 359   | 36 |       |
| 29 | 227   | 45 | 277   | 42 | 320   | 29 | 343   | 15 | 353   | 21 | 359   | 48 |       |
| 30 | 229   | 24 | 279   | 20 | 321   | 36 | 343   | 43 | 353   | 36 | 360   | 0  |       |



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♄     |    | ♂     |    | ♂     |    | ♂     |    | ♂     |    | ♂     |   |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|---|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | / |
| 0  | 0     | 0  | 5     | 26 | 14    | 6  | 35    | 13 | 78    | 28 | 129   | 38 |       |   |
| 1  | 0     | 10 | 5     | 39 | 14    | 30 | 36    | 20 | 80    | 9  | 131   | 20 |       |   |
| 2  | 0     | 20 | 5     | 52 | 14    | 56 | 37    | 28 | 81    | 49 | 133   | 1  |       |   |
| 3  | 0     | 30 | 6     | 5  | 15    | 24 | 38    | 37 | 83    | 29 | 134   | 43 |       |   |
| 4  | 0     | 40 | 6     | 18 | 15    | 52 | 39    | 49 | 85    | 11 | 136   | 25 |       |   |
| 5  | 0     | 51 | 6     | 31 | 16    | 21 | 41    | 2  | 86    | 53 | 138   | 7  |       |   |
| 6  | 1     | 1  | 6     | 45 | 16    | 50 | 42    | 17 | 88    | 35 | 139   | 48 |       |   |
| 7  | 1     | 11 | 6     | 59 | 17    | 20 | 43    | 34 | 90    | 17 | 141   | 30 |       |   |
| 8  | 1     | 21 | 7     | 13 | 17    | 51 | 44    | 52 | 91    | 59 | 143   | 11 |       |   |
| 9  | 1     | 31 | 7     | 28 | 18    | 24 | 46    | 12 | 93    | 42 | 144   | 52 |       |   |
| 10 | 1     | 42 | 7     | 43 | 18    | 59 | 47    | 33 | 95    | 24 | 146   | 33 |       |   |
| 11 | 1     | 52 | 7     | 58 | 19    | 33 | 48    | 57 | 97    | 7  | 148   | 14 |       |   |
| 12 | 2     | 2  | 8     | 13 | 20    | 9  | 50    | 21 | 98    | 50 | 149   | 55 |       |   |
| 13 | 2     | 13 | 8     | 29 | 20    | 46 | 51    | 46 | 100   | 32 | 151   | 36 |       |   |
| 14 | 2     | 23 | 8     | 45 | 21    | 24 | 53    | 11 | 102   | 15 | 153   | 16 |       |   |
| 15 | 2     | 34 | 9     | 1  | 22    | 4  | 54    | 39 | 103   | 58 | 154   | 57 |       |   |
| 16 | 2     | 45 | 9     | 18 | 22    | 46 | 56    | 8  | 105   | 41 | 156   | 38 |       |   |
| 17 | 2     | 56 | 9     | 36 | 23    | 30 | 57    | 38 | 107   | 24 | 158   | 18 |       |   |
| 18 | 3     | 7  | 9     | 53 | 24    | 15 | 59    | 10 | 109   | 7  | 159   | 58 |       |   |
| 19 | 3     | 18 | 10    | 11 | 25    | 1  | 60    | 42 | 110   | 50 | 161   | 39 |       |   |
| 20 | 3     | 29 | 10    | 30 | 25    | 48 | 62    | 15 | 112   | 32 | 163   | 19 |       |   |
| 21 | 3     | 40 | 10    | 49 | 26    | 37 | 63    | 55 | 114   | 15 | 165   | 0  |       |   |
| 22 | 3     | 51 | 11    | 8  | 27    | 27 | 65    | 24 | 115   | 58 | 166   | 40 |       |   |
| 23 | 4     | 3  | 11    | 28 | 28    | 19 | 67    | 0  | 117   | 41 | 168   | 20 |       |   |
| 24 | 4     | 14 | 11    | 49 | 29    | 13 | 68    | 36 | 119   | 23 | 170   | 0  |       |   |
| 25 | 4     | 26 | 12    | 11 | 30    | 8  | 70    | 14 | 121   | 6  | 171   | 40 |       |   |
| 26 | 4     | 38 | 12    | 32 | 31    | 6  | 71    | 52 | 122   | 49 | 173   | 20 |       |   |
| 27 | 4     | 49 | 12    | 54 | 32    | 5  | 73    | 30 | 124   | 31 | 175   | 0  |       |   |
| 28 | 5     | 1  | 13    | 19 | 33    | 6  | 75    | 8  | 126   | 13 | 176   | 40 |       |   |
| 29 | 5     | 14 | 13    | 42 | 34    | 9  | 76    | 47 | 127   | 56 | 178   | 20 |       |   |
| 30 | 5     | 26 | 14    | 6  | 35    | 13 | 78    | 28 | 129   | 38 | 180   | 0  |       |   |



## AD ELEVATIONEM POLI 62. GRADVS.

|    | ♈     | ♉  | ♊     | ♋  | ♌     | ♍  |
|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  |
| 0  | 180   | 0  | 230   | 22 | 281   | 32 |
| 1  | 181   | 40 | 232   | 4  | 283   | 13 |
| 2  | 183   | 20 | 233   | 47 | 284   | 52 |
| 3  | 185   | 0  | 235   | 29 | 286   | 30 |
| 4  | 186   | 40 | 237   | 11 | 288   | 8  |
| 5  | 188   | 20 | 238   | 54 | 289   | 46 |
| 6  | 190   | 0  | 240   | 37 | 291   | 24 |
| 7  | 191   | 40 | 242   | 19 | 293   | 0  |
| 8  | 193   | 20 | 244   | 2  | 294   | 36 |
| 9  | 195   | 0  | 245   | 45 | 296   | 11 |
| 10 | 196   | 41 | 247   | 28 | 297   | 45 |
| 11 | 198   | 21 | 249   | 10 | 299   | 18 |
| 12 | 200   | 2  | 250   | 53 | 300   | 50 |
| 13 | 201   | 42 | 252   | 36 | 302   | 22 |
| 14 | 203   | 22 | 254   | 19 | 303   | 52 |
| 15 | 205   | 3  | 256   | 2  | 305   | 21 |
| 16 | 206   | 44 | 257   | 45 | 306   | 49 |
| 17 | 208   | 24 | 259   | 28 | 308   | 14 |
| 18 | 210   | 5  | 261   | 10 | 309   | 39 |
| 19 | 211   | 46 | 262   | 53 | 311   | 3  |
| 20 | 213   | 27 | 264   | 36 | 312   | 27 |
| 21 | 215   | 8  | 266   | 18 | 313   | 48 |
| 22 | 216   | 49 | 268   | 1  | 315   | 8  |
| 23 | 218   | 30 | 269   | 43 | 316   | 26 |
| 24 | 220   | 12 | 271   | 25 | 317   | 43 |
| 25 | 221   | 53 | 273   | 7  | 318   | 58 |
| 26 | 223   | 35 | 274   | 49 | 320   | 11 |
| 27 | 225   | 17 | 276   | 31 | 321   | 22 |
| 28 | 226   | 59 | 278   | 11 | 322   | 32 |
| 29 | 228   | 40 | 279   | 51 | 323   | 40 |
| 30 | 230   | 22 | 281   | 32 | 324   | 47 |



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♄     |    | ♂     |    | ♂     |    | ♂     |    | ♂     |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |
| 0  | 0     | 0  | 4     | 23 | 11    | 39 | 31    | 29 | 76    | 2  | 128   | 35 |
| 1  | 0     | 8  | 4     | 34 | 12    | 1  | 32    | 36 | 77    | 46 | 130   | 19 |
| 2  | 0     | 16 | 4     | 44 | 12    | 23 | 33    | 44 | 79    | 29 | 132   | 3  |
| 3  | 0     | 24 | 4     | 55 | 12    | 47 | 34    | 55 | 81    | 14 | 133   | 48 |
| 4  | 0     | 32 | 5     | 6  | 13    | 12 | 36    | 7  | 82    | 58 | 135   | 32 |
| 5  | 0     | 41 | 5     | 17 | 13    | 37 | 37    | 22 | 84    | 43 | 137   | 15 |
| 6  | 0     | 49 | 5     | 28 | 14    | 2  | 38    | 38 | 86    | 28 | 138   | 59 |
| 7  | 0     | 57 | 5     | 40 | 14    | 29 | 39    | 57 | 88    | 13 | 140   | 43 |
| 8  | 1     | 6  | 5     | 51 | 14    | 57 | 41    | 18 | 89    | 58 | 142   | 26 |
| 9  | 1     | 14 | 6     | 3  | 15    | 27 | 42    | 40 | 91    | 44 | 144   | 9  |
| 10 | 1     | 22 | 6     | 15 | 15    | 59 | 44    | 4  | 93    | 29 | 145   | 53 |
| 11 | 1     | 31 | 6     | 28 | 16    | 29 | 45    | 30 | 95    | 14 | 147   | 35 |
| 12 | 1     | 39 | 6     | 41 | 17    | 1  | 46    | 56 | 97    | 1  | 149   | 19 |
| 13 | 1     | 48 | 6     | 54 | 17    | 34 | 48    | 23 | 98    | 47 | 151   | 2  |
| 14 | 1     | 56 | 7     | 8  | 18    | 10 | 49    | 51 | 100   | 32 | 152   | 45 |
| 15 | 2     | 5  | 7     | 21 | 18    | 48 | 51    | 21 | 102   | 18 | 154   | 28 |
| 16 | 2     | 13 | 7     | 35 | 19    | 27 | 52    | 53 | 104   | 4  | 156   | 10 |
| 17 | 2     | 22 | 7     | 50 | 20    | 8  | 54    | 26 | 105   | 49 | 157   | 53 |
| 18 | 2     | 30 | 8     | 5  | 20    | 50 | 56    | 0  | 107   | 34 | 159   | 35 |
| 19 | 2     | 39 | 8     | 20 | 21    | 34 | 57    | 37 | 109   | 20 | 161   | 17 |
| 20 | 2     | 48 | 8     | 35 | 22    | 18 | 59    | 15 | 111   | 5  | 162   | 59 |
| 21 | 2     | 57 | 8     | 51 | 23    | 4  | 60    | 52 | 112   | 51 | 164   | 42 |
| 22 | 3     | 6  | 9     | 8  | 23    | 52 | 62    | 30 | 114   | 36 | 166   | 24 |
| 23 | 3     | 15 | 9     | 24 | 24    | 42 | 64    | 9  | 116   | 22 | 168   | 6  |
| 24 | 3     | 25 | 9     | 42 | 25    | 34 | 65    | 49 | 118   | 6  | 169   | 48 |
| 25 | 3     | 34 | 10    | 0  | 26    | 28 | 67    | 30 | 119   | 52 | 171   | 30 |
| 26 | 3     | 44 | 10    | 18 | 27    | 24 | 69    | 12 | 121   | 37 | 173   | 12 |
| 27 | 3     | 54 | 10    | 38 | 28    | 22 | 70    | 53 | 123   | 21 | 174   | 54 |
| 28 | 4     | 3  | 10    | 58 | 29    | 23 | 72    | 35 | 125   | 6  | 176   | 36 |
| 29 | 4     | 13 | 11    | 19 | 30    | 25 | 74    | 18 | 126   | 50 | 178   | 18 |
| 30 | 4     | 23 | 11    | 39 | 31    | 29 | 76    | 2  | 128   | 35 | 180   | 0  |



## AD LATITVDINEM 63. GRADVS.

|    | L     |    | M     |    | T     |    | B     |    | =     |    | X     |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |
| 0  | 180   | 0  | 231   | 25 | 283   | 48 | 328   | 31 | 348   | 21 | 355   | 37 |
| 1  | 181   | 42 | 233   | 10 | 285   | 42 | 329   | 35 | 348   | 41 | 355   | 47 |
| 2  | 183   | 24 | 234   | 54 | 287   | 25 | 330   | 37 | 349   | 2  | 355   | 57 |
| 3  | 185   | 6  | 236   | 39 | 289   | 7  | 331   | 38 | 349   | 22 | 356   | 6  |
| 4  | 186   | 48 | 238   | 23 | 290   | 48 | 332   | 36 | 349   | 42 | 356   | 16 |
| 5  | 188   | 30 | 240   | 8  | 292   | 30 | 333   | 32 | 350   | 0  | 356   | 26 |
| 6  | 190   | 12 | 241   | 54 | 294   | 11 | 334   | 26 | 350   | 18 | 356   | 35 |
| 7  | 191   | 54 | 243   | 38 | 295   | 51 | 335   | 18 | 350   | 36 | 356   | 45 |
| 8  | 193   | 36 | 245   | 24 | 297   | 30 | 336   | 8  | 350   | 52 | 356   | 54 |
| 9  | 195   | 18 | 247   | 9  | 299   | 8  | 336   | 56 | 351   | 9  | 357   | 3  |
| 10 | 197   | 1  | 248   | 55 | 300   | 45 | 337   | 42 | 351   | 25 | 357   | 12 |
| 11 | 198   | 43 | 250   | 40 | 302   | 23 | 338   | 26 | 351   | 40 | 357   | 21 |
| 12 | 200   | 25 | 252   | 26 | 304   | 0  | 339   | 10 | 351   | 55 | 357   | 30 |
| 13 | 202   | 7  | 254   | 11 | 305   | 34 | 339   | 52 | 352   | 10 | 357   | 38 |
| 14 | 203   | 50 | 255   | 56 | 307   | 7  | 340   | 33 | 352   | 25 | 357   | 47 |
| 15 | 205   | 32 | 257   | 42 | 308   | 39 | 341   | 12 | 352   | 39 | 357   | 55 |
| 16 | 207   | 15 | 259   | 28 | 310   | 9  | 341   | 50 | 352   | 52 | 358   | 4  |
| 17 | 208   | 58 | 261   | 13 | 311   | 37 | 342   | 26 | 353   | 6  | 358   | 12 |
| 18 | 210   | 41 | 262   | 59 | 313   | 4  | 342   | 59 | 353   | 19 | 358   | 21 |
| 19 | 212   | 25 | 264   | 46 | 314   | 30 | 343   | 31 | 353   | 32 | 358   | 29 |
| 20 | 214   | 7  | 266   | 31 | 315   | 56 | 344   | 1  | 353   | 45 | 358   | 38 |
| 21 | 215   | 51 | 268   | 16 | 317   | 20 | 344   | 33 | 353   | 57 | 358   | 46 |
| 22 | 217   | 34 | 270   | 2  | 318   | 42 | 345   | 3  | 354   | 8  | 358   | 54 |
| 23 | 219   | 17 | 271   | 47 | 320   | 3  | 345   | 31 | 354   | 20 | 359   | 3  |
| 24 | 221   | 1  | 273   | 32 | 321   | 22 | 345   | 58 | 354   | 32 | 359   | 11 |
| 25 | 222   | 45 | 275   | 17 | 322   | 38 | 346   | 23 | 354   | 43 | 359   | 19 |
| 26 | 224   | 28 | 277   | 2  | 323   | 53 | 346   | 48 | 354   | 54 | 359   | 28 |
| 27 | 226   | 12 | 278   | 46 | 325   | 5  | 347   | 13 | 355   | 5  | 359   | 36 |
| 28 | 227   | 56 | 280   | 31 | 326   | 16 | 347   | 37 | 355   | 16 | 359   | 44 |
| 29 | 229   | 41 | 282   | 14 | 327   | 24 | 347   | 59 | 355   | 26 | 359   | 52 |
| 30 | 231   | 25 | 283   | 48 | 328   | 31 | 348   | 21 | 355   | 37 | 360   | 0  |



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♄     |    | ♂     |    | ♂     |    | ♂     |    | ♂     |    | ♂     |   |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|---|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | / |
| 0  | 0     | 0  | 3     | 17 | 8     | 55 | 26    | 59 | 73    | 17 | 127   | 28 |       |   |
| 1  | 0     | 6  | 3     | 25 | 9     | 12 | 28    | 5  | 75    | 6  | 129   | 15 |       |   |
| 2  | 0     | 12 | 3     | 33 | 9     | 30 | 29    | 15 | 76    | 52 | 131   | 1  |       |   |
| 3  | 0     | 18 | 3     | 41 | 9     | 49 | 30    | 26 | 78    | 40 | 132   | 48 |       |   |
| 4  | 0     | 24 | 3     | 49 | 10    | 10 | 31    | 40 | 80    | 29 | 134   | 35 |       |   |
| 5  | 0     | 30 | 3     | 57 | 10    | 31 | 32    | 56 | 82    | 19 | 136   | 20 |       |   |
| 6  | 0     | 36 | 4     | 6  | 10    | 52 | 34    | 14 | 84    | 7  | 138   | 7  |       |   |
| 7  | 0     | 42 | 4     | 15 | 11    | 14 | 35    | 36 | 85    | 56 | 139   | 53 |       |   |
| 8  | 0     | 49 | 4     | 23 | 11    | 38 | 37    | 0  | 87    | 45 | 141   | 39 |       |   |
| 9  | 0     | 55 | 4     | 32 | 12    | 4  | 38    | 26 | 89    | 35 | 143   | 24 |       |   |
| 10 | 1     | 1  | 4     | 42 | 12    | 31 | 39    | 54 | 91    | 23 | 145   | 10 |       |   |
| 11 | 1     | 7  | 4     | 51 | 12    | 58 | 41    | 24 | 93    | 11 | 146   | 55 |       |   |
| 12 | 1     | 14 | 5     | 1  | 13    | 16 | 42    | 55 | 95    | 1  | 148   | 40 |       |   |
| 13 | 1     | 20 | 5     | 11 | 13    | 55 | 44    | 25 | 96    | 51 | 150   | 26 |       |   |
| 14 | 1     | 26 | 5     | 22 | 14    | 25 | 45    | 57 | 98    | 39 | 152   | 11 |       |   |
| 15 | 1     | 32 | 5     | 32 | 14    | 57 | 47    | 31 | 100   | 28 | 153   | 55 |       |   |
| 16 | 1     | 39 | 5     | 43 | 15    | 32 | 49    | 8  | 102   | 17 | 155   | 40 |       |   |
| 17 | 1     | 45 | 5     | 54 | 16    | 10 | 50    | 45 | 104   | 6  | 157   | 25 |       |   |
| 18 | 1     | 52 | 6     | 5  | 16    | 49 | 52    | 26 | 105   | 54 | 159   | 10 |       |   |
| 19 | 1     | 58 | 6     | 16 | 17    | 29 | 54    | 7  | 107   | 43 | 160   | 54 |       |   |
| 20 | 2     | 5  | 6     | 29 | 18    | 9  | 55    | 49 | 109   | 32 | 162   | 39 |       |   |
| 21 | 2     | 12 | 6     | 42 | 18    | 50 | 57    | 29 | 111   | 20 | 164   | 23 |       |   |
| 22 | 2     | 19 | 6     | 54 | 19    | 35 | 59    | 11 | 113   | 8  | 166   | 7  |       |   |
| 23 | 2     | 26 | 7     | 7  | 20    | 22 | 60    | 54 | 114   | 55 | 167   | 51 |       |   |
| 24 | 2     | 33 | 7     | 21 | 21    | 11 | 62    | 39 | 116   | 44 | 169   | 35 |       |   |
| 25 | 2     | 40 | 7     | 36 | 22    | 3  | 64    | 25 | 118   | 32 | 171   | 20 |       |   |
| 26 | 2     | 47 | 7     | 50 | 22    | 57 | 66    | 11 | 120   | 19 | 173   | 4  |       |   |
| 27 | 2     | 54 | 8     | 5  | 23    | 54 | 67    | 56 | 122   | 7  | 174   | 48 |       |   |
| 28 | 3     | 1  | 8     | 21 | 24    | 53 | 69    | 42 | 123   | 54 | 176   | 32 |       |   |
| 29 | 3     | 9  | 8     | 38 | 25    | 54 | 71    | 29 | 125   | 41 | 178   | 16 |       |   |
| 30 | 3     | 17 | 8     | 55 | 26    | 59 | 73    | 17 | 127   | 28 | 180   | 0  |       |   |



## AD LATITVDINEM 64. GRADVS.

137

| ♈     |     |    | ♉     |    |  | ♊     |    |  | ♋     |    |  | ♌     |    |  |
|-------|-----|----|-------|----|--|-------|----|--|-------|----|--|-------|----|--|
| temp. | /   |    | temp. | /  |  | temp. | /  |  | temp. | /  |  | temp. | /  |  |
| 0     | 180 | 0  | 232   | 42 |  | 286   | 43 |  | 333   | 1  |  | 351   | 5  |  |
| 1     | 181 | 44 | 234   | 19 |  | 288   | 31 |  | 334   | 6  |  | 351   | 22 |  |
| 2     | 183 | 28 | 236   | 6  |  | 290   | 18 |  | 335   | 7  |  | 351   | 39 |  |
| 3     | 185 | 12 | 237   | 53 |  | 292   | 4  |  | 336   | 6  |  | 351   | 55 |  |
| 4     | 186 | 56 | 239   | 41 |  | 293   | 49 |  | 337   | 3  |  | 352   | 10 |  |
| 5     | 188 | 40 | 241   | 28 |  | 295   | 35 |  | 337   | 57 |  | 352   | 24 |  |
| 6     | 190 | 25 | 243   | 16 |  | 297   | 21 |  | 338   | 49 |  | 352   | 39 |  |
| 7     | 192 | 9  | 245   | 5  |  | 299   | 6  |  | 339   | 38 |  | 352   | 53 |  |
| 8     | 193 | 53 | 246   | 52 |  | 300   | 49 |  | 340   | 25 |  | 353   | 6  |  |
| 9     | 195 | 37 | 248   | 40 |  | 302   | 31 |  | 341   | 10 |  | 353   | 18 |  |
| 10    | 197 | 21 | 250   | 28 |  | 304   | 11 |  | 341   | 51 |  | 353   | 31 |  |
| 11    | 199 | 6  | 252   | 17 |  | 305   | 53 |  | 342   | 31 |  | 353   | 44 |  |
| 12    | 200 | 50 | 254   | 6  |  | 307   | 34 |  | 343   | 11 |  | 353   | 55 |  |
| 13    | 202 | 35 | 255   | 54 |  | 309   | 15 |  | 343   | 50 |  | 354   | 6  |  |
| 14    | 204 | 20 | 257   | 43 |  | 310   | 52 |  | 344   | 28 |  | 354   | 17 |  |
| 15    | 206 | 5  | 259   | 32 |  | 312   | 29 |  | 345   | 3  |  | 354   | 28 |  |
| 16    | 207 | 49 | 261   | 21 |  | 314   | 3  |  | 345   | 35 |  | 354   | 38 |  |
| 17    | 209 | 34 | 263   | 9  |  | 315   | 35 |  | 346   | 5  |  | 354   | 49 |  |
| 18    | 211 | 20 | 264   | 59 |  | 317   | 5  |  | 346   | 44 |  | 354   | 59 |  |
| 19    | 213 | 5  | 266   | 49 |  | 318   | 36 |  | 347   | 2  |  | 355   | 9  |  |
| 20    | 214 | 50 | 268   | 37 |  | 320   | 6  |  | 347   | 29 |  | 355   | 18 |  |
| 21    | 216 | 36 | 270   | 25 |  | 321   | 34 |  | 347   | 56 |  | 355   | 28 |  |
| 22    | 218 | 21 | 272   | 15 |  | 323   | 0  |  | 348   | 22 |  | 355   | 37 |  |
| 23    | 220 | 7  | 274   | 4  |  | 324   | 24 |  | 348   | 36 |  | 355   | 45 |  |
| 24    | 221 | 53 | 275   | 53 |  | 325   | 45 |  | 349   | 8  |  | 355   | 54 |  |
| 25    | 223 | 40 | 277   | 41 |  | 327   | 4  |  | 349   | 29 |  | 356   | 3  |  |
| 26    | 225 | 25 | 279   | 31 |  | 328   | 20 |  | 349   | 50 |  | 356   | 11 |  |
| 27    | 227 | 12 | 281   | 20 |  | 329   | 34 |  | 350   | 11 |  | 356   | 19 |  |
| 28    | 228 | 59 | 283   | 8  |  | 330   | 45 |  | 350   | 30 |  | 356   | 27 |  |
| 29    | 230 | 45 | 284   | 54 |  | 331   | 55 |  | 350   | 48 |  | 356   | 35 |  |
| 30    | 232 | 32 | 286   | 43 |  | 333   | 1  |  | 351   | 5  |  | 356   | 43 |  |

m



# TABVLA ASCENSIONVM OBLIQVARVM

| V     |   | ♄     |   | ♂     |    | ♂     |    | ♂     |     | ♂     |     | ♂     |   |
|-------|---|-------|---|-------|----|-------|----|-------|-----|-------|-----|-------|---|
| temp. | / | temp. | / | temp. | /  | temp. | /  | temp. | /   | temp. | /   | temp. | / |
| 0     | 0 | 0     | 2 | 4     | 5  | 48    | 21 | 8     | 70  | 10    | 126 | 15    |   |
| 1     | 0 | 4     | 2 | 9     | 6  | 0     | 22 | 15    | 72  | 3     | 128 | 5     |   |
| 2     | 0 | 8     | 2 | 14    | 6  | 13    | 23 | 25    | 73  | 56    | 129 | 55    |   |
| 3     | 0 | 11    | 2 | 19    | 6  | 27    | 24 | 39    | 75  | 48    | 131 | 44    |   |
| 4     | 0 | 15    | 2 | 25    | 6  | 41    | 25 | 56    | 77  | 42    | 133 | 33    |   |
| 5     | 0 | 19    | 2 | 30    | 6  | 55    | 27 | 16    | 79  | 36    | 135 | 21    |   |
| 6     | 0 | 23    | 2 | 36    | 7  | 10    | 28 | 39    | 81  | 29    | 137 | 10    |   |
| 7     | 0 | 26    | 2 | 41    | 7  | 26    | 30 | 6     | 83  | 22    | 138 | 59    |   |
| 8     | 0 | 30    | 2 | 47    | 7  | 44    | 31 | 36    | 85  | 16    | 140 | 47    |   |
| 9     | 0 | 34    | 2 | 53    | 8  | 3     | 33 | 9     | 87  | 9     | 142 | 35    |   |
| 10    | 0 | 38    | 2 | 59    | 8  | 23    | 34 | 44    | 89  | 2     | 144 | 23    |   |
| 11    | 0 | 42    | 3 | 5     | 8  | 44    | 36 | 19    | 90  | 55    | 146 | 11    |   |
| 12    | 0 | 46    | 3 | 11    | 9  | 4     | 37 | 55    | 92  | 49    | 147 | 59    |   |
| 13    | 0 | 50    | 3 | 18    | 9  | 26    | 39 | 32    | 94  | 43    | 149 | 47    |   |
| 14    | 0 | 54    | 3 | 25    | 9  | 49    | 41 | 10    | 96  | 36    | 151 | 34    |   |
| 15    | 0 | 58    | 3 | 32    | 10 | 16    | 42 | 50    | 98  | 29    | 153 | 21    |   |
| 16    | 1 | 2     | 3 | 39    | 10 | 45    | 44 | 32    | 100 | 21    | 155 | 8     |   |
| 17    | 1 | 6     | 3 | 46    | 11 | 17    | 46 | 17    | 102 | 13    | 156 | 56    |   |
| 18    | 1 | 10    | 3 | 53    | 11 | 50    | 48 | 4     | 104 | 5     | 158 | 43    |   |
| 19    | 1 | 14    | 4 | 0     | 12 | 24    | 49 | 52    | 105 | 57    | 160 | 29    |   |
| 20    | 1 | 19    | 4 | 8     | 12 | 59    | 51 | 40    | 107 | 49    | 162 | 16    |   |
| 21    | 1 | 23    | 4 | 17    | 13 | 34    | 53 | 28    | 109 | 40    | 164 | 3     |   |
| 22    | 1 | 27    | 4 | 25    | 14 | 11    | 55 | 16    | 111 | 31    | 165 | 49    |   |
| 23    | 1 | 32    | 4 | 34    | 14 | 51    | 57 | 6     | 113 | 23    | 167 | 35    |   |
| 24    | 1 | 36    | 4 | 43    | 15 | 34    | 58 | 57    | 115 | 14    | 169 | 22    |   |
| 25    | 1 | 40    | 4 | 53    | 16 | 22    | 60 | 49    | 117 | 5     | 171 | 8     |   |
| 26    | 1 | 45    | 5 | 3     | 17 | 12    | 62 | 42    | 118 | 56    | 172 | 55    |   |
| 27    | 1 | 50    | 5 | 13    | 18 | 6     | 64 | 33    | 120 | 46    | 174 | 41    |   |
| 28    | 1 | 55    | 5 | 24    | 19 | 4     | 66 | 25    | 122 | 36    | 176 | 27    |   |
| 29    | 1 | 59    | 5 | 36    | 20 | 4     | 68 | 17    | 124 | 26    | 178 | 14    |   |
| 30    | 2 | 4     | 5 | 48    | 21 | 8     | 70 | 10    | 126 | 15    | 180 | 0     |   |



# AD LATITVDINEM 65. GRADVS.

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|    | ♈     |    | ♉     |    | ♊     |    | ♋     |    | ♌     |    | ♍     |    | ♎     |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. |
| 0  | 180   | 0  | 233   | 45 | 289   | 50 | 338   | 52 | 354   | 12 | 357   | 56 |       |
| 1  | 181   | 46 | 235   | 34 | 291   | 43 | 339   | 56 | 354   | 24 | 358   | 1  |       |
| 2  | 183   | 33 | 237   | 24 | 293   | 35 | 340   | 56 | 354   | 36 | 358   | 5  |       |
| 3  | 185   | 19 | 239   | 14 | 295   | 27 | 341   | 54 | 354   | 47 | 358   | 10 |       |
| 4  | 187   | 5  | 241   | 4  | 297   | 18 | 342   | 48 | 354   | 57 | 358   | 15 |       |
| 5  | 188   | 52 | 242   | 55 | 299   | 11 | 343   | 38 | 355   | 7  | 358   | 20 |       |
| 6  | 190   | 38 | 244   | 46 | 301   | 3  | 344   | 26 | 355   | 17 | 358   | 54 |       |
| 7  | 192   | 25 | 246   | 37 | 302   | 54 | 345   | 9  | 355   | 26 | 358   | 28 |       |
| 8  | 194   | 11 | 248   | 29 | 304   | 44 | 345   | 49 | 355   | 35 | 358   | 33 |       |
| 9  | 195   | 57 | 250   | 20 | 306   | 32 | 346   | 26 | 355   | 43 | 358   | 37 |       |
| 10 | 197   | 44 | 252   | 11 | 308   | 20 | 347   | 1  | 355   | 52 | 358   | 41 |       |
| 11 | 199   | 30 | 254   | 3  | 310   | 8  | 347   | 36 | 356   | 0  | 358   | 46 |       |
| 12 | 201   | 17 | 255   | 55 | 311   | 56 | 348   | 10 | 356   | 7  | 358   | 50 |       |
| 13 | 203   | 4  | 257   | 47 | 313   | 43 | 348   | 43 | 356   | 14 | 358   | 54 |       |
| 14 | 204   | 52 | 259   | 39 | 315   | 28 | 349   | 15 | 356   | 21 | 359   | 58 |       |
| 15 | 206   | 39 | 261   | 31 | 317   | 10 | 349   | 44 | 356   | 28 | 359   | 2  |       |
| 16 | 208   | 26 | 263   | 24 | 318   | 50 | 350   | 11 | 356   | 35 | 359   | 6  |       |
| 17 | 210   | 13 | 265   | 17 | 320   | 28 | 350   | 34 | 356   | 42 | 359   | 10 |       |
| 18 | 212   | 1  | 267   | 11 | 322   | 5  | 350   | 56 | 356   | 49 | 359   | 14 |       |
| 19 | 213   | 49 | 269   | 5  | 323   | 41 | 351   | 16 | 356   | 55 | 359   | 18 |       |
| 20 | 215   | 37 | 270   | 58 | 325   | 16 | 351   | 37 | 357   | 1  | 359   | 22 |       |
| 21 | 217   | 25 | 272   | 51 | 326   | 51 | 351   | 57 | 357   | 7  | 359   | 26 |       |
| 22 | 219   | 13 | 274   | 44 | 328   | 24 | 352   | 16 | 357   | 13 | 359   | 30 |       |
| 23 | 221   | 1  | 276   | 38 | 329   | 54 | 352   | 34 | 357   | 19 | 359   | 34 |       |
| 24 | 222   | 50 | 278   | 31 | 331   | 21 | 352   | 50 | 357   | 24 | 359   | 37 |       |
| 25 | 224   | 39 | 280   | 24 | 332   | 44 | 353   | 5  | 357   | 30 | 359   | 41 |       |
| 26 | 226   | 27 | 282   | 18 | 334   | 4  | 353   | 19 | 357   | 35 | 359   | 45 |       |
| 27 | 228   | 16 | 284   | 12 | 335   | 21 | 353   | 33 | 357   | 41 | 359   | 49 |       |
| 28 | 230   | 5  | 286   | 4  | 336   | 35 | 353   | 47 | 357   | 46 | 359   | 52 |       |
| 29 | 231   | 55 | 287   | 57 | 337   | 45 | 354   | 0  | 357   | 51 | 359   | 56 |       |
| 30 | 233   | 45 | 289   | 50 | 338   | 52 | 354   | 12 | 357   | 56 | 360   | 0  |       |



# TABVLA ASCENSIONVM OBLIQVARVM

| V     |   | ♄     |   | ♂     |    | ♂     |    | ♂     |     | ♂     |     | ♂     |   |
|-------|---|-------|---|-------|----|-------|----|-------|-----|-------|-----|-------|---|
| temp. | / | temp. | / | temp. | /  | temp. | /  | temp. | /   | temp. | /   | temp. | / |
| 0     | 0 | 0     | 0 | 45    | 2  | 9     | 12 | 48    | 66  | 32    | 124 | 56    |   |
| 1     | 0 | 1     | 0 | 47    | 2  | 14    | 13 | 56    | 68  | 32    | 126 | 49    |   |
| 2     | 0 | 3     | 0 | 49    | 2  | 19    | 15 | 10    | 70  | 32    | 128 | 42    |   |
| 3     | 0 | 4     | 0 | 50    | 2  | 24    | 16 | 28    | 72  | 31    | 130 | 34    |   |
| 4     | 0 | 5     | 0 | 52    | 2  | 30    | 17 | 52    | 74  | 31    | 132 | 27    |   |
| 5     | 0 | 7     | 0 | 54    | 2  | 36    | 19 | 22    | 76  | 31    | 134 | 18    |   |
| 6     | 0 | 8     | 0 | 56    | 2  | 41    | 20 | 54    | 78  | 30    | 136 | 9     |   |
| 7     | 0 | 9     | 0 | 58    | 2  | 47    | 22 | 30    | 80  | 29    | 138 | 1     |   |
| 8     | 0 | 11    | 1 | 0     | 2  | 56    | 24 | 9     | 82  | 28    | 139 | 52    |   |
| 9     | 0 | 12    | 1 | 2     | 3  | 6     | 25 | 53    | 84  | 27    | 141 | 43    |   |
| 10    | 0 | 14    | 1 | 5     | 3  | 18    | 27 | 38    | 86  | 25    | 143 | 33    |   |
| 11    | 0 | 15    | 1 | 7     | 3  | 30    | 29 | 26    | 88  | 23    | 145 | 24    |   |
| 12    | 0 | 17    | 1 | 9     | 3  | 42    | 31 | 16    | 90  | 21    | 147 | 14    |   |
| 13    | 0 | 18    | 1 | 12    | 3  | 54    | 33 | 7     | 92  | 19    | 149 | 4     |   |
| 14    | 0 | 20    | 1 | 14    | 4  | 6     | 34 | 59    | 94  | 16    | 150 | 54    |   |
| 15    | 0 | 21    | 1 | 16    | 4  | 20    | 36 | 54    | 96  | 13    | 152 | 44    |   |
| 16    | 0 | 23    | 1 | 19    | 4  | 35    | 38 | 49    | 98  | 10    | 154 | 34    |   |
| 17    | 0 | 24    | 1 | 22    | 4  | 52    | 40 | 45    | 100 | 6     | 156 | 23    |   |
| 18    | 0 | 26    | 1 | 25    | 5  | 10    | 42 | 42    | 102 | 2     | 158 | 13    |   |
| 19    | 0 | 27    | 1 | 28    | 5  | 30    | 44 | 39    | 103 | 59    | 160 | 2     |   |
| 20    | 0 | 28    | 1 | 31    | 5  | 53    | 46 | 35    | 105 | 55    | 161 | 52    |   |
| 21    | 0 | 30    | 1 | 34    | 6  | 17    | 48 | 32    | 107 | 50    | 163 | 40    |   |
| 22    | 0 | 32    | 1 | 37    | 6  | 44    | 50 | 29    | 109 | 45    | 165 | 29    |   |
| 23    | 0 | 34    | 1 | 40    | 7  | 15    | 52 | 27    | 111 | 40    | 167 | 18    |   |
| 24    | 0 | 35    | 1 | 44    | 7  | 50    | 54 | 28    | 113 | 34    | 169 | 7     |   |
| 25    | 0 | 37    | 1 | 48    | 8  | 28    | 56 | 30    | 115 | 29    | 170 | 56    |   |
| 26    | 0 | 39    | 1 | 52    | 9  | 8     | 58 | 30    | 117 | 23    | 172 | 45    |   |
| 27    | 0 | 40    | 1 | 56    | 9  | 55    | 66 | 30    | 119 | 16    | 174 | 34    |   |
| 28    | 0 | 42    | 2 | 0     | 10 | 48    | 62 | 31    | 121 | 10    | 176 | 22    |   |
| 29    | 0 | 43    | 2 | 5     | 11 | 46    | 64 | 31    | 123 | 3     | 178 | 11    |   |
| 30    | 0 | 45    | 2 | 9     | 12 | 48    | 66 | 32    | 124 | 56    | 180 | 0     |   |



## AD LATITVDINEM 66. GRADVS

|    | ☾     |    | m     |    | ☿     |    | ♊     |    | ♋     |    | ♌     |    | ♍     |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. |
| 0  | 180   | 0  | 235   | 4  | 293   | 28 | 347   | 12 | 357   | 51 | 359   | 15 |       |
| 1  | 181   | 49 | 236   | 57 | 295   | 29 | 348   | 14 | 357   | 55 | 359   | 17 |       |
| 2  | 183   | 38 | 238   | 50 | 297   | 29 | 349   | 12 | 358   | 0  | 359   | 18 |       |
| 3  | 185   | 26 | 240   | 44 | 299   | 30 | 350   | 5  | 358   | 4  | 359   | 20 |       |
| 4  | 187   | 15 | 242   | 37 | 301   | 30 | 350   | 52 | 358   | 8  | 359   | 21 |       |
| 5  | 189   | 4  | 244   | 31 | 303   | 30 | 351   | 32 | 358   | 12 | 359   | 23 |       |
| 6  | 190   | 53 | 246   | 26 | 305   | 32 | 352   | 10 | 358   | 16 | 359   | 25 |       |
| 7  | 192   | 42 | 248   | 20 | 307   | 33 | 352   | 45 | 358   | 20 | 359   | 26 |       |
| 8  | 194   | 31 | 250   | 15 | 309   | 31 | 353   | 16 | 358   | 23 | 359   | 28 |       |
| 9  | 196   | 20 | 252   | 10 | 311   | 28 | 353   | 43 | 358   | 26 | 359   | 30 |       |
| 10 | 198   | 8  | 254   | 5  | 313   | 25 | 354   | 7  | 358   | 29 | 359   | 32 |       |
| 11 | 199   | 58 | 256   | 1  | 315   | 21 | 354   | 30 | 358   | 32 | 359   | 33 |       |
| 12 | 201   | 47 | 257   | 58 | 317   | 18 | 354   | 50 | 358   | 35 | 359   | 34 |       |
| 13 | 203   | 37 | 259   | 54 | 319   | 15 | 355   | 8  | 358   | 38 | 359   | 36 |       |
| 14 | 205   | 26 | 261   | 50 | 321   | 11 | 355   | 25 | 358   | 41 | 359   | 37 |       |
| 15 | 207   | 16 | 263   | 47 | 323   | 6  | 355   | 40 | 358   | 44 | 359   | 39 |       |
| 16 | 209   | 6  | 265   | 44 | 325   | 1  | 355   | 54 | 358   | 46 | 359   | 40 |       |
| 17 | 210   | 56 | 267   | 41 | 326   | 53 | 356   | 6  | 358   | 48 | 359   | 42 |       |
| 18 | 212   | 46 | 269   | 39 | 328   | 44 | 356   | 18 | 358   | 51 | 359   | 43 |       |
| 19 | 214   | 36 | 271   | 37 | 330   | 34 | 356   | 30 | 358   | 53 | 359   | 45 |       |
| 20 | 216   | 26 | 273   | 35 | 332   | 22 | 356   | 42 | 358   | 55 | 359   | 46 |       |
| 21 | 218   | 17 | 275   | 33 | 334   | 7  | 356   | 54 | 358   | 58 | 359   | 48 |       |
| 22 | 220   | 8  | 277   | 32 | 335   | 51 | 357   | 4  | 359   | 0  | 359   | 49 |       |
| 23 | 221   | 59 | 279   | 31 | 337   | 30 | 357   | 13 | 359   | 2  | 359   | 50 |       |
| 24 | 223   | 51 | 281   | 30 | 339   | 6  | 357   | 19 | 359   | 4  | 359   | 52 |       |
| 25 | 225   | 42 | 283   | 29 | 340   | 38 | 357   | 24 | 359   | 6  | 359   | 53 |       |
| 26 | 227   | 33 | 285   | 29 | 342   | 8  | 357   | 30 | 359   | 8  | 359   | 55 |       |
| 27 | 229   | 26 | 287   | 29 | 343   | 32 | 357   | 36 | 359   | 10 | 359   | 56 |       |
| 28 | 231   | 18 | 289   | 28 | 344   | 50 | 357   | 41 | 359   | 11 | 359   | 57 |       |
| 29 | 233   | 11 | 291   | 28 | 346   | 4  | 357   | 46 | 359   | 13 | 359   | 59 |       |
| 30 | 235   | 4  | 293   | 28 | 347   | 12 | 357   | 51 | 359   | 15 | 360   | 0  |       |



# TABVLA ASCENSIONVM OBLIQVARVM

| ♄     | ♅     | ♆     | ♇     | ♈     | ♉     | ♊     | ♋     | ♌     | ♍     | ♎     | ♏     | ♐     | ♑     | ♒     | ♓     |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| temp. | temp. | temp. | temp. | temp. | temp. | temp. | temp. | temp. | temp. | temp. | temp. | temp. | temp. | temp. | temp. |
| 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 64    | 22    | 124   | 11    |       |       |
| 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 2     | 11    | 66    | 27    | 126   | 6     |       |       |
| 2     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 4     | 22    | 68    | 32    | 128   | 0     |       |       |
| 3     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 6     | 32    | 70    | 36    | 129   | 54    |       |       |
| 4     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 8     | 43    | 72    | 39    | 131   | 48    |       |       |
| 5     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 10    | 54    | 74    | 43    | 133   | 41    |       |       |
| 6     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 13    | 5     | 76    | 46    | 135   | 34    |       |       |
| 7     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 15    | 15    | 78    | 48    | 137   | 27    |       |       |
| 8     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 17    | 25    | 80    | 51    | 139   | 20    |       |       |
| 9     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 19    | 36    | 82    | 53    | 141   | 12    |       |       |
| 10    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 21    | 46    | 84    | 54    | 143   | 4     |       |       |
| 11    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 23    | 56    | 86    | 55    | 144   | 57    |       |       |
| 12    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 26    | 6     | 88    | 56    | 146   | 48    |       |       |
| 13    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 28    | 15    | 90    | 57    | 148   | 40    |       |       |
| 14    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 30    | 25    | 92    | 57    | 150   | 32    |       |       |
| 15    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 32    | 34    | 94    | 56    | 152   | 23    |       |       |
| 16    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 34    | 43    | 96    | 56    | 154   | 14    |       |       |
| 17    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 36    | 52    | 98    | 55    | 156   | 5     |       |       |
| 18    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 39    | 1     | 100   | 54    | 157   | 56    |       |       |
| 19    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 41    | 9     | 102   | 52    | 159   | 47    |       |       |
| 20    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 43    | 17    | 104   | 50    | 161   | 38    |       |       |
| 21    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 45    | 25    | 106   | 47    | 163   | 28    |       |       |
| 22    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 47    | 33    | 108   | 45    | 165   | 19    |       |       |
| 23    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 49    | 40    | 110   | 42    | 167   | 9     |       |       |
| 24    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 51    | 47    | 112   | 38    | 168   | 59    |       |       |
| 25    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 53    | 54    | 114   | 35    | 170   | 49    |       |       |
| 26    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 56    | 0     | 116   | 31    | 172   | 40    |       |       |
| 27    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 58    | 6     | 118   | 26    | 174   | 30    |       |       |
| 28    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 60    | 12    | 120   | 22    | 176   | 20    |       |       |
| 29    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 62    | 17    | 122   | 17    | 178   | 10    |       |       |
| 30    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 64    | 22    | 124   | 11    | 180   | 0     |       |       |

In minima ☉ obliquitate nempe 23. ☿ 28.



## AD LATITVDINEM 66. GRADVS 32.

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| 5     | 12  | m     | T   | b     | ≡   | X     |   |       |   |       |   |   |
|-------|-----|-------|-----|-------|-----|-------|---|-------|---|-------|---|---|
| temp. | /   | temp. | /   | temp. | /   | temp. | / | temp. | / | temp. | / |   |
| 0     | 180 | 0     | 235 | 49    | 295 | 38    | 0 | 0     | 0 | 0     | 0 | 0 |
| 1     | 181 | 50    | 237 | 43    | 297 | 43    | 0 | 0     | 0 | 0     | 0 | 0 |
| 2     | 183 | 40    | 239 | 38    | 299 | 48    | 0 | 0     | 0 | 0     | 0 | 0 |
| 3     | 185 | 30    | 241 | 34    | 301 | 54    | 0 | 0     | 0 | 0     | 0 | 0 |
| 4     | 187 | 20    | 243 | 29    | 304 | 0     | 0 | 0     | 0 | 0     | 0 | 0 |
| 5     | 189 | 11    | 245 | 25    | 306 | 6     | 0 | 0     | 0 | 0     | 0 | 0 |
| 6     | 191 | 1     | 247 | 22    | 308 | 13    | 0 | 0     | 0 | 0     | 0 | 0 |
| 7     | 192 | 51    | 249 | 18    | 310 | 20    | 0 | 0     | 0 | 0     | 0 | 0 |
| 8     | 194 | 41    | 251 | 15    | 312 | 27    | 0 | 0     | 0 | 0     | 0 | 0 |
| 9     | 196 | 32    | 253 | 13    | 314 | 35    | 0 | 0     | 0 | 0     | 0 | 0 |
| 10    | 198 | 22    | 255 | 10    | 316 | 43    | 0 | 0     | 0 | 0     | 0 | 0 |
| 11    | 200 | 13    | 257 | 8     | 318 | 51    | 0 | 0     | 0 | 0     | 0 | 0 |
| 12    | 202 | 4     | 259 | 6     | 320 | 59    | 0 | 0     | 0 | 0     | 0 | 0 |
| 13    | 203 | 55    | 261 | 5     | 323 | 8     | 0 | 0     | 0 | 0     | 0 | 0 |
| 14    | 205 | 46    | 263 | 4     | 325 | 17    | 0 | 0     | 0 | 0     | 0 | 0 |
| 15    | 207 | 37    | 265 | 4     | 327 | 26    | 0 | 0     | 0 | 0     | 0 | 0 |
| 16    | 209 | 28    | 267 | 3     | 329 | 35    | 0 | 0     | 0 | 0     | 0 | 0 |
| 17    | 211 | 20    | 269 | 3     | 331 | 45    | 0 | 0     | 0 | 0     | 0 | 0 |
| 18    | 213 | 12    | 271 | 4     | 333 | 54    | 0 | 0     | 0 | 0     | 0 | 0 |
| 19    | 215 | 3     | 273 | 5     | 336 | 4     | 0 | 0     | 0 | 0     | 0 | 0 |
| 20    | 216 | 56    | 275 | 6     | 338 | 14    | 0 | 0     | 0 | 0     | 0 | 0 |
| 21    | 218 | 48    | 277 | 7     | 340 | 24    | 0 | 0     | 0 | 0     | 0 | 0 |
| 22    | 220 | 40    | 279 | 9     | 342 | 35    | 0 | 0     | 0 | 0     | 0 | 0 |
| 23    | 222 | 33    | 281 | 12    | 344 | 45    | 0 | 0     | 0 | 0     | 0 | 0 |
| 24    | 224 | 26    | 283 | 14    | 346 | 55    | 0 | 0     | 0 | 0     | 0 | 0 |
| 25    | 226 | 19    | 285 | 17    | 349 | 6     | 0 | 0     | 0 | 0     | 0 | 0 |
| 26    | 228 | 12    | 287 | 21    | 351 | 17    | 0 | 0     | 0 | 0     | 0 | 0 |
| 27    | 230 | 6     | 289 | 24    | 353 | 28    | 0 | 0     | 0 | 0     | 0 | 0 |
| 28    | 232 | 0     | 291 | 28    | 355 | 38    | 0 | 0     | 0 | 0     | 0 | 0 |
| 29    | 233 | 54    | 293 | 33    | 357 | 49    | 0 | 0     | 0 | 0     | 0 | 0 |
| 30    | 235 | 49    | 295 | 38    | 360 | 0     | 0 | 0     | 0 | 0     | 0 | 0 |



# TABVLA ASCENSIONVM OBLIQVARVM

| V     |     | ♄     |     | II    |      | ♅     |    | ♄     |  | ♅     |    | ♄     |    |
|-------|-----|-------|-----|-------|------|-------|----|-------|--|-------|----|-------|----|
| temp. |     | temp. |     | temp. |      | temp. |    | temp. |  | temp. |    | temp. |    |
| 0     | 360 | 0     | 359 | 18    | 357  | 52    |    |       |  | 62    | 14 | 123   | 29 |
| 1     | 359 | 59    | 359 | 16    | 357  | 46    |    |       |  | 64    | 24 | 125   | 25 |
| 2     | 359 | 57    | 359 | 14    | 357  | 40    |    |       |  | 66    | 34 | 127   | 21 |
| 3     | 359 | 56    | 359 | 12    | 357  | 33    |    |       |  | 68    | 43 | 129   | 17 |
| 4     | 359 | 55    | 359 | 11    | 357  | 26    |    | dit.  |  | 70    | 51 | 131   | 12 |
| 5     | 359 | 54    | 359 | 9     | 357  | 18    |    |       |  | 72    | 58 | 133   | 7  |
| 6     | 359 | 53    | 359 | 6     | 357  | 10    |    |       |  | 75    | 4  | 135   | 2  |
| 7     | 359 | 51    | 359 | 4     | 357  | 1     |    |       |  | 77    | 10 | 136   | 56 |
| 8     | 359 | 50    | 359 | 2     | 356  | 51    |    |       |  | 79    | 16 | 138   | 51 |
| 9     | 359 | 49    | 359 | 0     | 356  | 39    |    |       |  | 81    | 22 | 140   | 45 |
| 10    | 359 | 48    | 358 | 58    | 356  | 26    |    |       |  | 83    | 27 | 141   | 38 |
| 11    | 359 | 46    | 358 | 56    | 356  | 11    |    |       |  | 85    | 31 | 144   | 32 |
| 12    | 359 | 45    | 358 | 54    | 3555 | 53    | 17 | 50    |  | 87    | 35 | 146   | 25 |
| 13    | 359 | 44    | 358 | 51    | 355  | 33    | 21 | 28    |  | 89    | 37 | 148   | 18 |
| 14    | 359 | 42    | 358 | 49    | 355  | 10    | 24 | 22    |  | 91    | 40 | 150   | 11 |
| 15    | 359 | 41    | 358 | 46    | 354  | 39    | 27 | 13    |  | 93    | 42 | 152   | 4  |
| 16    | 359 | 39    | 358 | 43    | 353  | 57    | 29 | 53    |  | 95    | 44 | 153   | 56 |
| 17    | 359 | 38    | 358 | 41    | 353  | 13    | 32 | 25    |  | 97    | 46 | 155   | 49 |
| 18    | 359 | 36    | 358 | 38    | 351  | 44    | 34 | 54    |  | 99    | 47 | 157   | 41 |
| 19    | 359 | 35    | 358 | 35    | Non  |       | 37 | 20    |  | 101   | 48 | 159   | 33 |
| 20    | 359 | 34    | 358 | 33    |      |       | 39 | 43    |  | 103   | 48 | 161   | 25 |
| 21    | 359 | 32    | 358 | 29    | oc   |       | 42 | 4     |  | 105   | 48 | 163   | 17 |
| 22    | 359 | 31    | 358 | 25    |      |       | 44 | 23    |  | 107   | 47 | 165   | 8  |
| 23    | 359 | 29    | 358 | 21    | ci   |       | 46 | 41    |  | 109   | 46 | 167   | 0  |
| 24    | 359 | 28    | 358 | 18    |      |       | 48 | 57    |  | 111   | 45 | 168   | 52 |
| 25    | 359 | 26    | 358 | 15    |      |       | 51 | 12    |  | 113   | 44 | 170   | 44 |
| 26    | 359 | 24    | 358 | 11    |      |       | 53 | 26    |  | 115   | 42 | 172   | 35 |
| 27    | 359 | 23    | 358 | 7     |      |       | 55 | 39    |  | 117   | 39 | 174   | 26 |
| 28    | 356 | 21    | 358 | 2     |      |       | 57 | 52    |  | 119   | 36 | 176   | 18 |
| 29    | 359 | 19    | 357 | 57    |      |       | 60 | 3     |  | 121   | 33 | 178   | 9  |
| 30    | 359 | 18    | 357 | 52    |      |       | 62 | 14    |  | 123   | 29 | 180   | 0  |

Arcus ab initio 69. utrinque partium 11. 8 scrup. semper extat supra horizontem.  
 Cum 11. partib. 8. scrup. & oriuntur 12. tempora 7 scrup. æquinoctialis, ac inde immediate oriuntur partes quæ sequuntur 11. 8. 69.



## AD LATITVDINEM 67. GRADVS.

|    | ☿     |    | ♈     |    | ♉     |    | ♊     |    | ♋     |    | ♌     |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. |    |
| 0  | 180   | 0  | 236   | 31 | 297   | 46 |       |    | 2     | 8  | 0     | 42 |
| 1  | 181   | 51 | 238   | 27 | 299   | 57 |       |    | 2     | 3  | 0     | 41 |
| 2  | 183   | 42 | 240   | 24 | 302   | 8  |       | t  | 1     | 58 | 0     | 39 |
| 3  | 185   | 34 | 242   | 21 | 304   | 21 |       |    | 1     | 53 | 0     | 37 |
| 4  | 187   | 25 | 244   | 18 | 306   | 34 |       |    | 1     | 49 | 0     | 36 |
| 5  | 189   | 16 | 246   | 16 | 308   | 48 |       | u  | 1     | 45 | 0     | 34 |
| 6  | 191   | 8  | 248   | 15 | 311   | 3  |       |    | 1     | 42 | 0     | 32 |
| 7  | 193   | 0  | 250   | 14 | 313   | 19 |       |    | 1     | 39 | 0     | 31 |
| 8  | 194   | 52 | 252   | 13 | 315   | 37 |       |    | 1     | 35 | 0     | 29 |
| 9  | 196   | 43 | 254   | 12 | 317   | 56 |       | r  | 1     | 31 | 0     | 28 |
| 10 | 198   | 35 | 256   | 12 | 320   | 17 |       |    | 1     | 27 | 0     | 26 |
| 11 | 200   | 27 | 258   | 12 | 322   | 40 |       |    | 1     | 25 | 0     | 25 |
| 12 | 202   | 19 | 260   | 13 | 325   | 6  | 8     | 16 | 1     | 22 | 0     | 24 |
| 13 | 204   | 11 | 262   | 14 | 327   | 35 | 6     | 47 | 1     | 19 | 0     | 22 |
| 14 | 206   | 4  | 264   | 16 | 330   | 7  | 6     | 3  | 1     | 17 | 0     | 21 |
| 15 | 207   | 56 | 266   | 18 | 332   | 47 | 5     | 21 | 1     | 14 | 0     | 19 |
| 16 | 209   | 49 | 268   | 20 | 335   | 38 | 4     | 50 | 1     | 11 | 0     | 18 |
| 17 | 211   | 42 | 270   | 23 | 338   | 32 | 4     | 27 | 1     | 9  | 0     | 16 |
| 18 | 213   | 35 | 272   | 25 | 342   | 10 | 4     | 7  | 1     | 6  | 0     | 15 |
| 19 | 215   | 28 | 274   | 29 | N     |    | 3     | 49 | 1     | 4  | 0     | 14 |
| 20 | 217   | 22 | 276   | 33 |       |    | 3     | 34 | 1     | 2  | 0     | 12 |
| 21 | 219   | 15 | 278   | 38 | o     |    | 3     | 21 | 1     | 0  | 0     | 11 |
| 22 | 221   | 9  | 280   | 44 |       |    | 3     | 9  | 0     | 58 | 0     | 10 |
| 23 | 223   | 4  | 282   | 50 | n     |    | 2     | 59 | 0     | 56 | 0     | 9  |
| 24 | 224   | 58 | 284   | 56 |       |    | 2     | 50 | 0     | 54 | 0     | 7  |
| 25 | 226   | 53 | 287   | 2  | o     |    | 2     | 42 | 0     | 51 | 0     | 6  |
| 26 | 228   | 48 | 289   | 9  |       |    | 2     | 34 | 0     | 49 | 0     | 5  |
| 27 | 230   | 43 | 291   | 17 | ri=   |    | 2     | 27 | 0     | 48 | 0     | 4  |
| 28 | 232   | 39 | 293   | 26 |       |    | 2     | 20 | 0     | 46 | 0     | 3  |
| 29 | 234   | 35 | 295   | 36 |       |    | 2     | 14 | 0     | 44 | 0     | 1  |
| 30 | 236   | 31 | 297   | 46 |       |    | 2     | 8  | 0     | 42 | 0     | 0  |

Arcus ab initio & utrinque 11 partib. 8 scrup. semper latet sub Horizonte. Cum 18 part. 42 ☿ oriuntur 347 tempora 53 scrup. æquinoctialis, ac inde immediate oriuntur partes, quæ antecedunt partes 18. 42. II.



# TABVLA ASCENSIONVM OBLIQVARVM

| V     |     |    | ♄     |    |  | II    |    |    | ♅     |   |  | ♆     |    |  | ♇     |    |  |
|-------|-----|----|-------|----|--|-------|----|----|-------|---|--|-------|----|--|-------|----|--|
| temp. | /   |    | temp. | /  |  | temp. | /  |    | temp. | / |  | temp. | /  |  | temp. | /  |  |
| 0     | 360 | 0  | 357   | 42 |  | 352   | 24 |    |       |   |  | 56    | 46 |  | 121   | 53 |  |
| 1     | 359 | 56 | 357   | 37 |  | 351   | 59 |    | oc    |   |  | 59    | 13 |  | 123   | 54 |  |
| 2     | 359 | 52 | 357   | 31 |  | 351   | 31 |    |       |   |  | 61    | 38 |  | 125   | 54 |  |
| 3     | 359 | 48 | 357   | 25 |  | 351   | 0  |    |       |   |  | 64    | 1  |  | 127   | 53 |  |
| 4     | 359 | 44 | 357   | 18 |  | 350   | 25 |    |       |   |  | 66    | 22 |  | 129   | 52 |  |
| 5     | 359 | 39 | 357   | 12 |  | 349   | 45 |    | ci    |   |  | 68    | 42 |  | 131   | 50 |  |
| 6     | 359 | 35 | 357   | 5  |  | 348   | 58 |    |       |   |  | 71    | 0  |  | 133   | 49 |  |
| 7     | 359 | 31 | 356   | 58 |  | 347   | 58 |    |       |   |  | 73    | 17 |  | 135   | 47 |  |
| 8     | 359 | 27 | 356   | 52 |  | 346   | 42 |    |       |   |  | 75    | 32 |  | 137   | 44 |  |
| 9     | 359 | 22 | 356   | 45 |  | 344   | 52 |    |       |   |  | 77    | 47 |  | 139   | 41 |  |
| 10    | 359 | 18 | 356   | 37 |  | 340   | 50 |    |       |   |  | 79    | 59 |  | 141   | 38 |  |
| 11    | 359 | 14 | 356   | 30 |  | Hic   |    |    | d     |   |  | 82    | 10 |  | 143   | 35 |  |
| 12    | 359 | 10 | 356   | 22 |  |       |    |    |       |   |  | 84    | 21 |  | 145   | 31 |  |
| 13    | 359 | 6  | 356   | 13 |  | ars   |    |    |       |   |  | 86    | 33 |  | 147   | 28 |  |
| 14    | 359 | 1  | 356   | 5  |  |       |    |    |       |   |  | 88    | 43 |  | 149   | 24 |  |
| 15    | 358 | 57 | 355   | 56 |  | cus   |    |    | i     |   |  | 90    | 52 |  | 151   | 20 |  |
| 16    | 358 | 52 | 355   | 46 |  |       |    |    |       |   |  | 93    | 0  |  | 153   | 15 |  |
| 17    | 358 | 48 | 355   | 36 |  | zo    |    |    | t     |   |  | 95    | 8  |  | 155   | 11 |  |
| 18    | 358 | 43 | 355   | 25 |  |       |    |    |       |   |  | 97    | 15 |  | 157   | 6  |  |
| 19    | 358 | 38 | 355   | 15 |  | di    |    | 24 | 8     |   |  | 99    | 22 |  | 159   | 1  |  |
| 20    | 358 | 34 | 355   | 5  |  |       |    |    |       |   |  | 101   | 27 |  | 160   | 56 |  |
| 21    | 358 | 29 | 354   | 54 |  | a     |    | 30 | 17    |   |  | 103   | 32 |  | 162   | 51 |  |
| 22    | 358 | 25 | 354   | 42 |  |       |    | 34 | 15    |   |  | 105   | 36 |  | 164   | 45 |  |
| 23    | 358 | 20 | 354   | 28 |  |       |    | 37 | 38    |   |  | 107   | 40 |  | 166   | 40 |  |
| 24    | 358 | 15 | 354   | 14 |  | ci    |    | 40 | 45    |   |  | 109   | 43 |  | 168   | 34 |  |
| 25    | 358 | 9  | 353   | 59 |  |       |    | 43 | 38    |   |  | 111   | 46 |  | 170   | 29 |  |
| 26    | 358 | 4  | 353   | 42 |  |       |    | 46 | 25    |   |  | 113   | 49 |  | 172   | 23 |  |
| 27    | 357 | 59 | 353   | 25 |  | non   |    | 49 | 6     |   |  | 115   | 51 |  | 174   | 17 |  |
| 28    | 357 | 53 | 353   | 6  |  |       |    | 51 | 43    |   |  | 117   | 52 |  | 176   | 12 |  |
| 29    | 357 | 48 | 352   | 46 |  |       |    | 54 | 16    |   |  | 119   | 53 |  | 178   | 6  |  |
| 30    | 357 | 42 | 352   | 24 |  |       |    | 56 | 46    |   |  | 121   | 53 |  | 180   | 0  |  |

for utrinque ab initio ☿ semper extat supra horizon

Arcus zodiaci 19. part. 50. scr. utrinq; ab initio ♄ semper extat supra horis ontem.  
 Cum 19. partib. 50. scr. ♄ oriuntur 21. tempora a 28. scr. æquinoctialis, ac inde immedie  
 diate ascendunt, partes zodiaci, quæ sequuntur 19. partes 50. scr. ♄



## AD LATITVDINEM GRADVS. 68.

|    | ♈     |    | ♉     |    | ♊     |     | ♋     |       | ♌     |    | ♍     |    | ♎     |
|----|-------|----|-------|----|-------|-----|-------|-------|-------|----|-------|----|-------|
|    | temp. | /  | temp. | /  | temp. | /   | temp. | /     | temp. | /  | temp. | /  | temp. |
| 0  | 180   | 0  | 238   | 7  | 303   | 14  |       |       | 7     | 36 | 2     | 18 |       |
| 1  | 181   | 54 | 240   | 7  | 305   | 44  |       | ci    | 7     | 14 | 2     | 12 |       |
| 2  | 183   | 48 | 242   | 8  | 308   | 17  |       |       | 6     | 54 | 2     | 7  |       |
| 3  | 185   | 43 | 244   | 9  | 310   | 54  |       | non   | 6     | 35 | 2     | 1  |       |
| 4  | 187   | 37 | 246   | 11 | 313   | 35  |       |       | 6     | 18 | 1     | 56 |       |
| 5  | 189   | 31 | 248   | 14 | 316   | 22  |       |       | 6     | 1  | 1     | 51 |       |
| 6  | 191   | 26 | 250   | 17 | 319   | 15  |       |       | 5     | 46 | 1     | 45 |       |
| 7  | 193   | 20 | 252   | 20 | 322   | 22  |       | o     | 5     | 32 | 1     | 40 |       |
| 8  | 195   | 15 | 254   | 24 | 325   | 45  |       |       | 5     | 18 | 1     | 35 |       |
| 9  | 197   | 9  | 256   | 28 | 329   | 43  |       |       | 5     | 6  | 1     | 31 |       |
| 10 | 199   | 4  | 258   | 33 | 335   | 52  |       |       | 4     | 55 | 1     | 26 |       |
| 11 | 200   | 59 | 260   | 38 |       |     |       | r     | 4     | 45 | 1     | 22 |       |
| 12 | 202   | 54 | 262   | 45 |       | Hic |       |       | 4     | 35 | 1     | 17 |       |
| 13 | 204   | 49 | 264   | 52 |       |     |       | i     | 4     | 24 | 1     | 12 |       |
| 14 | 206   | 45 | 267   | 0  |       | ar  |       |       | 4     | 14 | 1     | 8  |       |
| 15 | 208   | 40 | 269   | 8  |       |     |       |       | 4     | 4  | 1     | 3  |       |
| 16 | 210   | 36 | 271   | 17 |       |     |       |       | 3     | 55 | 0     | 59 |       |
| 17 | 212   | 32 | 273   | 27 |       | cus |       | tur   | 3     | 47 | 0     | 54 |       |
| 18 | 214   | 29 | 275   | 39 |       |     |       |       | 3     | 38 | 0     | 50 |       |
| 19 | 216   | 25 | 277   | 50 |       |     |       |       | 3     | 30 | 0     | 46 |       |
| 20 | 218   | 22 | 280   | 1  |       | 20  |       | 19 10 | 3     | 23 | 0     | 42 |       |
| 21 | 220   | 19 | 282   | 13 |       |     |       | 15 8  | 3     | 15 | 0     | 38 |       |
| 22 | 222   | 16 | 284   | 28 |       |     |       | 13 18 | 3     | 8  | 0     | 33 |       |
| 23 | 224   | 13 | 286   | 43 |       |     |       | 12 2  | 3     | 2  | 0     | 29 |       |
| 24 | 226   | 11 | 289   | 0  |       |     |       | 11 2  | 2     | 55 | 0     | 25 |       |
| 25 | 228   | 10 | 291   | 18 |       | di  |       | 10 15 | 2     | 48 | 0     | 21 |       |
| 26 | 230   | 8  | 293   | 38 |       |     |       | 9 35  | 2     | 42 | 0     | 16 |       |
| 27 | 232   | 7  | 295   | 59 |       |     |       | 9 0   | 2     | 35 | 0     | 12 |       |
| 28 | 234   | 6  | 298   | 22 |       | a   |       | 8 29  | 2     | 29 | 0     | 8  |       |
| 29 | 236   | 6  | 300   | 47 |       |     |       | 8 1   | 2     | 23 | 0     | 4  |       |
| 30 | 238   | 7  | 303   | 14 |       |     |       | 7 36  | 2     | 18 | 0     | 0  |       |

Arcus zodiaci 19. partib. 50. scrup. utrinq; ab initio ♋ semper latet sub Horizonte.  
 Cum 10. partib. 10. scrup. ♈ oriuntur 338. tempora 32. scrup. æquinoctialis, ac inde  
 immediate oriuntur partes zodiaci, quæ antecedunt partes 10. 10. scr. II



# TABVLA ASCENSIONVM OBLIQVARVM

| V     |     |    | ♄     |    |  | II    |    |  | ♅     |    |  | ♆     |    |  | ♇     |   |  | ♈     |   |  |
|-------|-----|----|-------|----|--|-------|----|--|-------|----|--|-------|----|--|-------|---|--|-------|---|--|
| temp. | /   |    | temp. | /  |  | temp. | /  |  | temp. | /  |  | temp. | /  |  | temp. | / |  | temp. | / |  |
| 0     | 360 | 0  | 355   | 56 |  | 344   | 39 |  |       |    |  | 49    | 1  |  | 120   |   |  | 7     |   |  |
| 1     | 359 | 53 | 355   | 46 |  | 343   | 31 |  | ci    |    |  | 52    | 8  |  | 122   |   |  | 12    |   |  |
| 2     | 359 | 46 | 355   | 35 |  | 341   | 46 |  |       |    |  | 55    | 5  |  | 124   |   |  | 16    |   |  |
| 3     | 359 | 38 | 355   | 24 |  | 339   | 18 |  |       |    |  | 57    | 56 |  | 126   |   |  | 20    |   |  |
| 4     | 359 | 31 | 355   | 13 |  | 334   | 49 |  | non   |    |  | 60    | 41 |  | 128   |   |  | 23    |   |  |
| 5     | 359 | 24 | 355   | 1  |  |       |    |  |       |    |  | 63    | 20 |  | 130   |   |  | 25    |   |  |
| 6     | 359 | 16 | 354   | 48 |  | Hic   |    |  |       |    |  | 65    | 56 |  | 132   |   |  | 27    |   |  |
| 7     | 359 | 9  | 354   | 36 |  |       |    |  |       |    |  | 68    | 29 |  | 134   |   |  | 29    |   |  |
| 8     | 359 | 2  | 354   | 23 |  | arz   |    |  |       |    |  | 71    | 0  |  | 136   |   |  | 30    |   |  |
| 9     | 358 | 54 | 354   | 10 |  |       |    |  |       |    |  | 73    | 28 |  | 138   |   |  | 32    |   |  |
| 10    | 358 | 47 | 353   | 57 |  | cus   |    |  | oc    |    |  | 75    | 53 |  | 140   |   |  | 33    |   |  |
| 11    | 358 | 39 | 353   | 43 |  |       |    |  |       |    |  | 78    | 15 |  | 142   |   |  | 33    |   |  |
| 12    | 358 | 32 | 353   | 28 |  |       |    |  |       |    |  | 80    | 36 |  | 144   |   |  | 33    |   |  |
| 13    | 358 | 24 | 353   | 12 |  | z     |    |  | ci    |    |  | 82    | 56 |  | 146   |   |  | 33    |   |  |
| 14    | 358 | 16 | 352   | 56 |  |       |    |  |       |    |  | 85    | 16 |  | 148   |   |  | 32    |   |  |
| 15    | 358 | 9  | 352   | 38 |  |       |    |  |       |    |  | 87    | 34 |  | 150   |   |  | 32    |   |  |
| 16    | 358 | 1  | 352   | 19 |  |       |    |  |       |    |  | 89    | 51 |  | 152   |   |  | 31    |   |  |
| 17    | 357 | 53 | 352   | 0  |  |       |    |  | d     |    |  | 92    | 7  |  | 154   |   |  | 29    |   |  |
| 18    | 357 | 45 | 351   | 40 |  | o     |    |  |       |    |  | 94    | 21 |  | 156   |   |  | 28    |   |  |
| 19    | 357 | 37 | 351   | 20 |  |       |    |  |       |    |  | 96    | 34 |  | 158   |   |  | 26    |   |  |
| 20    | 357 | 29 | 350   | 58 |  |       |    |  | i     |    |  | 98    | 46 |  | 160   |   |  | 24    |   |  |
| 21    | 357 | 20 | 350   | 35 |  |       |    |  |       |    |  | 100   | 57 |  | 162   |   |  | 23    |   |  |
| 22    | 357 | 11 | 350   | 9  |  |       |    |  |       |    |  | 103   | 7  |  | 164   |   |  | 21    |   |  |
| 23    | 357 | 2  | 349   | 41 |  | d     |    |  |       |    |  | 105   | 17 |  | 166   |   |  | 18    |   |  |
| 24    | 356 | 53 | 349   | 11 |  |       |    |  | t     |    |  | 107   | 27 |  | 168   |   |  | 16    |   |  |
| 25    | 356 | 44 | 348   | 37 |  | i     |    |  |       |    |  | 109   | 36 |  | 170   |   |  | 13    |   |  |
| 26    | 356 | 35 | 348   | 2  |  |       |    |  | 30    | 49 |  | 111   | 44 |  | 172   |   |  | 10    |   |  |
| 27    | 356 | 26 | 347   | 21 |  |       |    |  | 37    | 24 |  | 113   | 51 |  | 174   |   |  | 8     |   |  |
| 28    | 356 | 16 | 346   | 33 |  | a     |    |  | 41    | 58 |  | 115   | 57 |  | 176   |   |  | 5     |   |  |
| 29    | 356 | 6  | 345   | 41 |  |       |    |  | 45    | 40 |  | 118   | 2  |  | 178   |   |  | 3     |   |  |
| 30    | 355 | 56 | 344   | 39 |  |       |    |  | 49    | 1  |  | 120   | 7  |  | 180   |   |  | 0     |   |  |

Arcus zodiaci 25. part. 51. scr. utrinq; ab initio ♄ semper extat supra horizontem.  
 Cum 25. partib. 51. scr. & oriuntur 27. tempora 50. scr. æquinoctialis, ac inde immer-  
 diate ascendunt partes zodiaci, quæ sequuntur partes 25. 51. ♄



## AD LATITVDINEM 69. GRADVS

|    | ♈     | ♉  | ♊     | ♋  | ♌     | ♍  | ♎     |    |       |    |       |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |
| 0  | 180   | 0  | 239   | 53 | 310   | 59 |       |    | 15    | 21 | 4     | 4  |
| 1  | 181   | 57 | 241   | 58 | 314   | 20 | ci    |    | 14    | 19 | 3     | 54 |
| 2  | 183   | 55 | 244   | 3  | 318   | 2  |       |    | 13    | 27 | 3     | 44 |
| 3  | 185   | 52 | 246   | 9  | 322   | 36 | fem   |    | 12    | 39 | 3     | 34 |
| 4  | 187   | 50 | 248   | 16 | 329   | 11 |       |    | 11    | 58 | 3     | 25 |
| 5  | 189   | 47 | 250   | 24 | Hic   |    |       |    | 11    | 23 | 3     | 16 |
| 6  | 191   | 44 | 252   | 33 |       |    | per   |    | 10    | 49 | 3     | 7  |
| 7  | 193   | 42 | 254   | 43 | ar    |    |       |    | 10    | 19 | 2     | 58 |
| 8  | 195   | 39 | 256   | 53 |       |    |       |    | 9     | 51 | 2     | 49 |
| 9  | 197   | 37 | 258   | 3  |       |    | est   |    | 9     | 25 | 2     | 40 |
| 10 | 199   | 36 | 261   | 14 | c     |    |       |    | 9     | 2  | 2     | 31 |
| 11 | 201   | 34 | 263   | 26 |       |    |       |    | 8     | 40 | 2     | 23 |
| 12 | 203   | 32 | 265   | 39 |       |    | oc    |    | 8     | 20 | 2     | 15 |
| 13 | 205   | 31 | 267   | 53 | us    |    |       |    | 8     | 0  | 2     | 7  |
| 14 | 207   | 29 | 270   | 9  |       |    |       |    | 7     | 41 | 1     | 59 |
| 15 | 209   | 28 | 272   | 26 |       |    | cul   |    | 7     | 22 | 1     | 51 |
| 16 | 211   | 28 | 274   | 44 |       |    |       |    | 7     | 4  | 1     | 44 |
| 17 | 213   | 27 | 277   | 4  |       |    |       |    | 6     | 48 | 1     | 36 |
| 18 | 215   | 27 | 279   | 24 | z     |    | ta    |    | 6     | 32 | 1     | 28 |
| 19 | 217   | 27 | 281   | 45 |       |    |       |    | 6     | 17 | 1     | 21 |
| 20 | 219   | 27 | 284   | 7  |       |    |       |    | 6     | 3  | 1     | 13 |
| 21 | 221   | 28 | 286   | 32 | o     |    | tus   |    | 5     | 50 | 1     | 6  |
| 22 | 223   | 30 | 289   | 0  |       |    |       |    | 5     | 37 | 0     | 58 |
| 23 | 225   | 31 | 291   | 31 |       |    |       |    | 5     | 24 | 0     | 51 |
| 24 | 227   | 33 | 294   | 4  |       |    |       |    | 5     | 12 | 0     | 44 |
| 25 | 229   | 35 | 296   | 40 | d     |    |       |    | 4     | 59 | 0     | 36 |
| 26 | 231   | 37 | 299   | 19 |       |    | 25    | 11 | 4     | 47 | 0     | 29 |
| 27 | 233   | 40 | 302   | 4  | i     |    | 20    | 42 | 4     | 36 | 0     | 22 |
| 28 | 235   | 44 | 304   | 55 |       |    | 18    | 14 | 4     | 25 | 0     | 14 |
| 29 | 237   | 48 | 307   | 52 |       |    | 16    | 29 | 4     | 14 | 0     | 7  |
| 30 | 239   | 53 | 310   | 59 | a     |    | 15    | 21 | 4     | 4  | 0     | 0  |

Arcus zodiaci 25. par. 51. scr. utrinq; ab initio & semper later infra horizontem.  
 Cum 4. partib. 9. scr. ♄. oriuntur 332. tempora 10. scr. æquinoctialis, ac inde immedi-  
 ate ascendunt partes, quæ antecedunt partes, 4. 9. scr. II.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♄     |    | II    | ♅     | ♆     | ♇     | ♈     |
|----|-------|----|-------|----|-------|-------|-------|-------|-------|
|    | temp. | /  | temp. | /  | temp. | temp. | temp. | temp. | temp. |
| 0  | 360   | 0  | 353   | 58 |       |       |       | ret   | 118   |
| 1  | 359   | 49 | 353   | 43 | ar    | a     | 37    | 0     | 120   |
| 2  | 359   | 39 | 353   | 26 |       |       | 43    | 43    | 121   |
| 3  | 359   | 28 | 353   | 9  |       |       | 48    | 27    | 124   |
| 4  | 359   | 18 | 352   | 52 |       |       | 52    | 23    | 126   |
| 5  | 359   | 7  | 352   | 34 |       |       | 55    | 53    | 128   |
| 6  | 358   | 56 | 352   | 15 |       | ci    | 59    | 0     | 130   |
| 7  | 358   | 45 | 351   | 55 | cus   |       | 62    | 14    | 133   |
| 8  | 358   | 34 | 351   | 36 |       |       | 65    | 11    | 135   |
| 9  | 358   | 23 | 351   | 15 |       |       | 68    | 2     | 137   |
| 10 | 358   | 12 | 350   | 53 |       |       | 70    | 47    | 139   |
| 11 | 358   | 1  | 350   | 31 |       | fem   | 73    | 28    | 141   |
| 12 | 356   | 50 | 350   | 7  |       |       | 76    | 6     | 143   |
| 13 | 356   | 39 | 349   | 41 |       |       | 78    | 42    | 145   |
| 14 | 356   | 27 | 349   | 15 |       |       | 81    | 15    | 147   |
| 15 | 356   | 16 | 348   | 48 |       |       | 83    | 44    | 149   |
| 16 | 356   | 4  | 348   | 19 |       | per   | 86    | 11    | 151   |
| 17 | 356   | 52 | 347   | 46 |       |       | 88    | 36    | 153   |
| 18 | 356   | 40 | 347   | 11 | zo    |       | 91    | 1     | 155   |
| 19 | 356   | 28 | 346   | 33 |       |       | 93    | 23    | 157   |
| 20 | 356   | 16 | 345   | 52 |       | ad    | 95    | 43    | 159   |
| 21 | 356   | 3  | 345   | 9  |       |       | 98    | 2     | 161   |
| 22 | 355   | 50 | 344   | 21 |       |       | 100   | 20    | 163   |
| 23 | 355   | 37 | 343   | 26 |       |       | 102   | 37    | 165   |
| 24 | 355   | 23 | 342   | 23 |       |       | 104   | 53    | 167   |
| 25 | 355   | 10 | 341   | 11 |       |       | 107   | 8     | 169   |
| 26 | 354   | 57 | 339   | 43 |       | pa    | 109   | 22    | 171   |
| 27 | 354   | 43 | 337   | 51 | di    |       | 111   | 35    | 173   |
| 28 | 354   | 28 | 335   | 11 |       |       | 113   | 47    | 175   |
| 29 | 354   | 13 | 330   | 32 |       |       | 115   | 58    | 178   |
| 30 | 353   | 58 | Hic   |    |       |       | 118   | 9     | 180   |

Arcus zodiaci partium 30. 49. scr. utrinq; ab initio ♄. semper extat super horizon-  
tem. Cum o parte. 49. scr. ☿ oriuntur 33 tempora 2 scr. æquinoctialis, ac inde ima-  
mediate ascendunt partes zodiaci, quæ sequuntur o. partes 49. scr. ♈



## AD LATITVDINEM 70. GRADVS

|    | ♌     |    | ♍     |    | ♎     |   | ♏     |   | ♐     |    | ♑     |    | ♒     |   | ♓     |   | ♈     |
|----|-------|----|-------|----|-------|---|-------|---|-------|----|-------|----|-------|---|-------|---|-------|
|    | temp. | /  | temp. | /  | temp. | / | temp. | / | temp. | /  | temp. | /  | temp. | / | temp. | / | temp. |
| 0  | 180   | 0  | 241   | 51 |       |   |       |   |       |    |       |    | ter   |   | 6     | 2 |       |
| 1  | 182   | 0  | 244   | 2  | ar    |   | ci    |   | 29    | 28 | 5     | 47 |       |   |       |   |       |
| 2  | 184   | 1  | 246   | 13 |       |   |       |   | 24    | 49 | 5     | 32 |       |   |       |   |       |
| 3  | 186   | 2  | 248   | 25 |       |   |       |   | 22    | 9  | 5     | 17 |       |   |       |   |       |
| 4  | 188   | 3  | 250   | 37 |       |   |       |   | 20    | 17 | 5     | 3  |       |   |       |   |       |
| 5  | 190   | 4  | 252   | 52 |       |   |       |   | 18    | 49 | 4     | 50 |       |   |       |   |       |
| 6  | 192   | 5  | 255   | 7  | cus   |   | fem   |   | 17    | 37 | 4     | 37 |       |   |       |   |       |
| 7  | 194   | 6  | 257   | 23 |       |   |       |   | 16    | 34 | 4     | 23 |       |   |       |   |       |
| 8  | 196   | 7  | 259   | 40 |       |   |       |   | 15    | 39 | 4     | 10 |       |   |       |   |       |
| 9  | 198   | 9  | 261   | 58 |       |   |       |   | 14    | 51 | 3     | 57 |       |   |       |   |       |
| 10 | 200   | 10 | 264   | 17 |       |   |       |   | 14    | 8  | 3     | 44 |       |   |       |   |       |
| 11 | 202   | 12 | 266   | 37 |       |   |       |   | 13    | 27 | 3     | 32 |       |   |       |   |       |
| 12 | 204   | 14 | 268   | 59 | zo    |   | per   |   | 12    | 49 | 3     | 20 |       |   |       |   |       |
| 13 | 206   | 16 | 271   | 24 |       |   |       |   | 12    | 14 | 3     | 8  |       |   |       |   |       |
| 14 | 208   | 19 | 273   | 49 |       |   |       |   | 11    | 41 | 2     | 56 |       |   |       |   |       |
| 15 | 210   | 21 | 276   | 16 |       |   |       |   | 11    | 12 | 2     | 44 |       |   |       |   |       |
| 16 | 212   | 24 | 278   | 45 |       |   |       |   | 10    | 45 | 2     | 33 |       |   |       |   |       |
| 17 | 214   | 28 | 281   | 18 |       |   |       |   | 10    | 19 | 2     | 21 |       |   |       |   |       |
| 18 | 216   | 31 | 283   | 54 |       |   |       |   | 9     | 53 | 2     | 10 |       |   |       |   |       |
| 19 | 218   | 36 | 286   | 32 |       |   |       |   | 9     | 29 | 1     | 59 |       |   |       |   |       |
| 20 | 220   | 40 | 289   | 13 | di    |   | l     |   | 9     | 7  | 1     | 48 |       |   |       |   |       |
| 21 | 222   | 45 | 291   | 58 |       |   |       |   | 8     | 45 | 1     | 37 |       |   |       |   |       |
| 22 | 224   | 50 | 294   | 49 |       |   |       |   | 8     | 24 | 1     | 26 |       |   |       |   |       |
| 23 | 226   | 55 | 297   | 46 |       |   |       |   | 8     | 5  | 1     | 15 |       |   |       |   |       |
| 24 | 229   | 2  | 300   | 51 |       |   |       |   | 7     | 45 | 1     | 4  |       |   |       |   |       |
| 25 | 231   | 9  | 304   | 7  |       |   |       |   | 7     | 26 | 0     | 53 |       |   |       |   |       |
| 26 | 233   | 16 | 307   | 37 |       |   |       |   | 7     | 8  | 0     | 42 |       |   |       |   |       |
| 27 | 235   | 24 | 311   | 33 |       |   |       |   | 6     | 51 | 0     | 32 |       |   |       |   |       |
| 28 | 237   | 32 | 316   | 17 | a     |   |       |   | 6     | 34 | 0     | 21 |       |   |       |   |       |
| 29 | 239   | 41 | 323   | 0  |       |   | a     |   | 6     | 17 | 0     | 11 |       |   |       |   |       |
| 30 | 241   | 51 | Hic   |    |       |   |       |   | 6     | 2  | 0     | 0  |       |   |       |   |       |

Arcus zodiaci part. 30. 49. scr. . utrinque ab initio ♎ semper latet infra horizontem.  
 Cum 29. partib. 11. scr. ♍ oriuntur 326. tempora 58. scr. æquinoctialis, ac inde im-  
 mediate ascendunt partes quæ antecedunt 29. partes 11. scr. ♎.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♄     |    | II    |   | ♅     |   | ♆     |   | ♇     |   | ♈     |
|----|-------|----|-------|----|-------|---|-------|---|-------|---|-------|---|-------|
|    | temp. | /  | temp. | /  | temp. | / | temp. | / | temp. | / | temp. | / | temp. |
| 0  | 360   | 0  | 351   | 44 |       |   |       |   |       |   |       |   | 115   |
| 1  | 359   | 46 | 351   | 22 |       |   |       |   |       |   |       |   | 118   |
| 2  | 359   | 32 | 351   | 0  |       |   |       |   |       |   |       |   | 120   |
| 3  | 359   | 17 | 350   | 36 |       |   |       |   |       |   |       |   | 122   |
| 4  | 359   | 3  | 350   | 11 |       |   |       |   |       |   |       |   | 124   |
| 5  | 358   | 48 | 349   | 45 |       |   |       |   |       |   |       |   | 127   |
| 6  | 358   | 34 | 349   | 18 |       |   |       |   |       |   |       |   | 129   |
| 7  | 358   | 19 | 348   | 51 |       |   |       |   |       |   |       |   | 131   |
| 8  | 358   | 5  | 348   | 22 |       |   |       |   |       |   |       |   | 133   |
| 9  | 357   | 50 | 347   | 52 |       |   |       |   |       |   |       |   | 135   |
| 10 | 357   | 35 | 347   | 20 |       |   |       |   |       |   |       |   | 138   |
| 11 | 357   | 19 | 346   | 46 |       |   |       |   |       |   |       |   | 140   |
| 12 | 357   | 4  | 346   | 9  |       |   |       |   |       |   |       |   | 142   |
| 13 | 356   | 49 | 345   | 30 |       |   |       |   |       |   |       |   | 144   |
| 14 | 356   | 34 | 344   | 49 |       |   |       |   |       |   |       |   | 146   |
| 15 | 356   | 18 | 344   | 4  |       |   |       |   |       |   |       |   | 148   |
| 16 | 356   | 2  | 343   | 15 |       |   |       |   |       |   |       |   | 150   |
| 17 | 355   | 46 | 342   | 22 |       |   |       |   |       |   |       |   | 152   |
| 18 | 355   | 30 | 341   | 24 |       |   |       |   |       |   |       |   | 155   |
| 19 | 355   | 14 | 340   | 18 |       |   |       |   |       |   |       |   | 157   |
| 20 | 354   | 57 | 339   | 4  |       |   |       |   |       |   |       |   | 159   |
| 21 | 354   | 39 | 337   | 37 |       |   |       |   |       |   |       |   | 161   |
| 22 | 354   | 21 | 335   | 50 |       |   |       |   |       |   |       |   | 163   |
| 23 | 354   | 3  | 333   | 35 |       |   |       |   |       |   |       |   | 165   |
| 24 | 353   | 44 | 330   | 17 |       |   |       |   |       |   |       |   | 167   |
| 25 | 353   | 25 | Hic   |    |       |   |       |   |       |   |       |   | 169   |
| 26 | 353   | 6  |       |    |       |   |       |   |       |   |       |   | 171   |
| 27 | 352   | 46 |       |    |       |   |       |   |       |   |       |   | 173   |
| 28 | 352   | 26 | ar    |    |       |   |       |   |       |   |       |   | 175   |
| 29 | 352   | 5  |       |    |       |   |       |   |       |   |       |   | 177   |
| 30 | 351   | 44 |       |    |       |   |       |   |       |   |       |   | 180   |

Arcus zodiaci partium 35. 10. scr. utrinque ab initio ♄. semper extat super horizon-  
tem. Cum 5 parte. 10 scr. ♄ oriuntur 37 tempora 32 scr. æquinoctialis, ac inde im-  
mediate ascendunt partes zodiaci, quæ sequuntur 5 partes 10 scr. ♈



## AD LATITVDINEM 71. GRADVS.

|    | ♈     |    | ♎     |    | ♊     |   | ♋     |   | ♌     |    | ♍     |
|----|-------|----|-------|----|-------|---|-------|---|-------|----|-------|
|    | temp. | /  | temp. | /  | temp. | / | temp. | / | temp. | /  | temp. |
| 0  | 180   | 0  | 244   | 5  |       |   |       |   |       |    | 8 16  |
| 1  | 182   | 4  | 246   | 21 | cus   |   | sem   |   |       |    | 7 55  |
| 2  | 184   | 9  | 248   | 39 |       |   |       |   |       |    | 7 34  |
| 3  | 186   | 13 | 250   | 58 |       |   |       |   |       |    | 7 14  |
| 4  | 188   | 17 | 253   | 19 |       |   |       |   |       |    | 6 54  |
| 5  | 190   | 22 | 255   | 41 | zo    |   | per   |   | 29    | 43 | 6 35  |
| 6  | 192   | 27 | 258   | 3  |       |   |       |   |       |    | 6 16  |
| 7  | 194   | 32 | 260   | 28 |       |   |       |   | 26    | 25 | 5 57  |
| 8  | 196   | 37 | 262   | 53 |       |   |       |   | 24    | 10 | 5 39  |
| 9  | 198   | 42 | 265   | 21 |       |   |       |   | 22    | 23 | 5 21  |
| 10 | 200   | 48 | 267   | 50 |       |   |       |   | 20    | 56 | 5 3   |
| 11 | 202   | 54 | 270   | 22 | di    |   |       |   | 19    | 42 | 4 46  |
| 12 | 205   | 0  | 272   | 58 |       |   |       |   | 18    | 36 | 4 30  |
| 13 | 207   | 6  | 275   | 35 |       |   |       |   | 17    | 38 | 4 14  |
| 14 | 209   | 12 | 278   | 16 |       |   |       |   | 16    | 45 | 3 58  |
| 15 | 211   | 19 | 281   | 0  |       |   | la    |   | 15    | 56 | 3 42  |
| 16 | 213   | 26 | 283   | 49 |       |   |       |   | 15    | 11 | 3 26  |
| 17 | 215   | 33 | 286   | 41 | a     |   |       |   | 14    | 30 | 3 11  |
| 18 | 217   | 42 | 289   | 40 |       |   |       |   | 13    | 51 | 2 56  |
| 19 | 219   | 50 | 292   | 47 |       |   |       |   | 13    | 14 | 2 41  |
| 20 | 221   | 59 | 296   | 2  |       |   |       |   | 12    | 40 | 2 25  |
| 21 | 224   | 8  | 299   | 31 |       |   |       |   | 12    | 8  | 2 10  |
| 22 | 226   | 19 | 303   | 19 |       |   |       |   | 11    | 38 | 1 55  |
| 23 | 228   | 30 | 307   | 37 |       |   |       |   | 11    | 9  | 1 41  |
| 24 | 230   | 42 | 312   | 58 |       |   |       |   | 10    | 42 | 1 26  |
| 25 | 232   | 54 |       |    | ci    |   | tet   |   | 10    | 15 | 1 12  |
| 26 | 235   | 6  | Hic   |    |       |   |       |   | 9     | 49 | 0 57  |
| 27 | 237   | 20 |       |    |       |   |       |   | 9     | 24 | 0 43  |
| 28 | 239   | 34 | ar    |    |       |   |       |   | 9     | 0  | 0 28  |
| 29 | 241   | 49 |       |    |       |   |       |   | 8     | 38 | 0 14  |
| 30 | 244   | 5  |       |    |       |   |       |   | 8     | 16 | 0 0   |

Arcus zodiaci part. 35. 10. scr. utrinq; ab initio ♋ semper latet supra horizontem.  
 Cum 24. parte 50. scr. ♎ ascendunt 322. tempora 28. scr. æquinoctialis, ac inde im-  
 mediate ascendunt partes zodiaci, quæ antecedunt partes 24. 5 c. scr. ♋.



# TABVLA ASCENSIONVM OBLIQVARVM

| V     |      | ♄     |     | ♂     |     | ♂     |    | ♂     |     | ♂     |    |
|-------|------|-------|-----|-------|-----|-------|----|-------|-----|-------|----|
| temp. |      | temp. |     | temp. |     | temp. |    | temp. |     | temp. |    |
| 0     | 360  | 0     | 349 | 12    |     |       |    |       |     | 113   | 23 |
| 1     | 359  | 42    | 348 | 42    | a   | per   |    |       |     | 115   | 46 |
| 2     | 359  | 23    | 348 | 11    |     |       |    |       | ret | 118   | 9  |
| 3     | 359  | 5     | 347 | 39    |     |       |    |       |     | 120   | 30 |
| 4     | 358  | 46    | 347 | 5     |     |       |    |       |     | 122   | 50 |
| 5     | 358  | 28    | 346 | 28    |     |       |    |       |     | 125   | 9  |
| 6     | 358  | 9     | 345 | 51    | ci  |       |    |       |     | 127   | 27 |
| 7     | 357  | 50    | 345 | 12    |     |       |    |       |     | 129   | 44 |
| 8     | 357  | 31    | 344 | 31    |     |       |    |       |     | 132   | 0  |
| 9     | 357  | 11    | 343 | 47    |     |       |    |       |     | 134   | 15 |
| 10    | 356  | 52    | 343 | 0     |     |       |    | 52    | 3   | 136   | 30 |
| 11    | 356  | 33    | 342 | 10    |     |       |    | 57    | 33  | 138   | 45 |
| 12    | 356  | 13    | 341 | 16    | ar  |       |    | 62    | 0   | 140   | 58 |
| 13    | 355  | 54    | 340 | 15    |     |       |    | 65    | 54  | 142   | 12 |
| 14    | 355  | 34    | 339 | 10    |     |       |    | 69    | 28  | 144   | 24 |
| 15    | 355  | 13    | 337 | 57    |     |       |    | 72    | 53  | 146   | 36 |
| 16    | 354  | 52    | 336 | 32    |     |       |    | 76    | 5   | 148   | 48 |
| 17    | 354  | 31    | 334 | 57    |     |       |    | 79    | 10  | 151   | 59 |
| 18    | 354  | 10    | 333 | 4     |     |       |    | 82    | 10  | 154   | 9  |
| 19    | 353  | 48    | 330 | 38    | cus | ad    |    | 85    | 2   | 156   | 20 |
| 20    | 353  | 26    | 327 | 9     |     |       |    | 87    | 50  | 158   | 29 |
| 21    | 353  | 3     | Hic |       |     |       |    | 90    | 34  | 160   | 39 |
| 22    | 352  | 40    |     |       |     |       |    | 93    | 16  | 162   | 49 |
| 23    | 352  | 17    | zo  |       |     |       |    | 95    | 54  | 164   | 59 |
| 24    | 3551 | 53    |     |       |     |       |    | 98    | 29  | 167   | 8  |
| 25    | 351  | 28    |     |       |     |       |    | 101   | 3   | 169   | 17 |
| 26    | 351  | 2     |     |       | fem |       |    | 103   | 35  | 171   | 26 |
| 27    | 350  | 36    | di  |       |     |       | pa | 106   | 5   | 173   | 35 |
| 28    | 350  | 9     |     |       |     |       |    | 108   | 33  | 175   | 43 |
| 29    | 349  | 41    |     |       |     |       |    | 110   | 59  | 177   | 52 |
| 30    | 349  | 12    |     |       |     |       |    | 113   | 23  | 180   | 0  |

Arcus zodiaci part. 39. 6. scr. utrinque ab initio ♂ semper extrat supra horizontem.  
 Cum 9. parte 6. scr. ascendunt 41. tempora 33. scr. æquinoctialis, ac inde ita  
 medietate ascendunt partes zodiaci, quæ sequuntur partes 9. 6. scr. ♀



## AD LATITVDINEM 72. GRADVS.

|    | ♈     |    | ♊     |    | ♉     |   | ♈     |   | ♊     |    | ♉     |   | ♈     |    | ♊     |
|----|-------|----|-------|----|-------|---|-------|---|-------|----|-------|---|-------|----|-------|
|    | temp. | /  | temp. | /  | temp. | / | temp. | / | temp. | /  | temp. | / | temp. | /  | temp. |
| 0  | 180   | 0  | 246   | 37 |       |   |       |   |       |    |       |   | 10    | 48 |       |
| 1  | 182   | 8  | 249   | 1  | di    |   | fem   |   |       |    |       |   | 10    | 19 |       |
| 2  | 184   | 17 | 251   | 27 |       |   |       |   | tet   |    |       |   | 9     | 51 |       |
| 3  | 186   | 25 | 253   | 55 |       |   |       |   |       |    |       |   | 9     | 24 |       |
| 4  | 188   | 34 | 256   | 25 |       |   |       |   |       |    |       |   | 8     | 58 |       |
| 5  | 190   | 43 | 258   | 57 |       |   |       |   |       |    |       |   | 8     | 32 |       |
| 6  | 192   | 52 | 261   | 31 |       |   |       |   |       |    |       |   | 8     | 7  |       |
| 7  | 195   | 1  | 264   | 6  | a     |   |       |   |       |    |       |   | 7     | 43 |       |
| 8  | 197   | 11 | 266   | 44 |       |   |       |   |       |    |       |   | 7     | 20 |       |
| 9  | 199   | 21 | 269   | 26 |       |   | per   |   |       |    |       |   | 6     | 57 |       |
| 10 | 201   | 31 | 272   | 10 |       |   |       |   | 32    | 51 |       |   | 6     | 34 |       |
| 11 | 203   | 40 | 274   | 58 |       |   |       |   | 29    | 22 |       |   | 6     | 12 |       |
| 12 | 205   | 51 | 277   | 50 |       |   |       |   | 27    | 56 |       |   | 5     | 50 |       |
| 13 | 208   | 1  | 280   | 50 |       |   |       |   | 25    | 3  |       |   | 5     | 29 |       |
| 14 | 211   | 12 | 283   | 55 |       |   |       |   | 23    | 28 |       |   | 5     | 8  |       |
| 15 | 213   | 24 | 287   | 7  | ci    |   |       |   | 22    | 3  |       |   | 4     | 47 |       |
| 16 | 215   | 36 | 290   | 32 |       |   |       |   | 20    | 50 |       |   | 4     | 26 |       |
| 17 | 217   | 48 | 294   | 6  |       |   |       |   | 19    | 45 |       |   | 4     | 6  |       |
| 18 | 219   | 2  | 298   | 0  |       |   |       |   | 18    | 44 |       |   | 3     | 47 |       |
| 19 | 221   | 15 | 302   | 27 |       |   |       |   | 17    | 50 |       |   | 3     | 27 |       |
| 20 | 223   | 30 | 307   | 57 |       |   |       |   | 17    | 0  |       |   | 3     | 8  |       |
| 21 | 225   | 45 | Hic   |    | ar    |   |       |   | 16    | 13 |       |   | 2     | 49 |       |
| 22 | 228   | 0  |       |    |       |   |       |   | 15    | 29 |       |   | 2     | 29 |       |
| 23 | 230   | 16 |       |    |       |   |       |   | 14    | 48 |       |   | 2     | 10 |       |
| 24 | 232   | 33 |       |    |       |   |       |   | 14    | 9  |       |   | 1     | 51 |       |
| 25 | 234   | 51 |       |    |       |   | la    |   | 13    | 32 |       |   | 1     | 32 |       |
| 26 | 237   | 10 |       |    |       |   |       |   | 12    | 35 |       |   | 1     | 14 |       |
| 27 | 239   | 30 | zo    |    |       |   |       |   | 12    | 21 |       |   | 0     | 55 |       |
| 28 | 241   | 51 |       |    |       |   |       |   | 11    | 49 |       |   | 0     | 37 |       |
| 29 | 244   | 14 |       |    |       |   | cus   |   | 11    | 18 |       |   | 0     | 18 |       |
| 30 | 246   | 37 |       |    |       |   |       |   | 10    | 48 |       |   | 0     | 0  |       |

Arcus zodiaci part. 39. 6. scrup. utrinque ab initio ♊ semper latet sub Horizonte.  
 Cum 20. parte 54. scrup. ♊ oriuntur 3. 8. tempora 27. scr. æquinoct. ac inde immediate  
 ascendunt partes zodiaci, quæ antecedunt partes 20. 54. scr. 8.



# TABVLA ASCENSIONVM OBLIQVAVM

|    | V     |    | ♈     |    | II    | ♊ | ♋     | ♌   | ♍     |
|----|-------|----|-------|----|-------|---|-------|-----|-------|
|    | temp. | /  | temp. | /  | temp. | / | temp. | /   | temp. |
| 0  | 360   | 0  | 346   | 14 |       |   |       |     | 110   |
| 1  | 359   | 37 | 345   | 35 | zo    |   | fem   |     | 112   |
| 2  | 359   | 14 | 344   | 54 |       |   |       | pa  | 115   |
| 3  | 358   | 52 | 344   | 11 |       |   |       |     | 117   |
| 4  | 358   | 28 | 343   | 25 |       |   |       |     | 120   |
| 5  | 358   | 5  | 342   | 37 |       |   |       |     | 122   |
| 6  | 357   | 41 | 341   | 43 |       |   |       |     | 125   |
| 7  | 357   | 18 | 340   | 49 |       |   |       |     | 127   |
| 8  | 356   | 54 | 339   | 49 |       |   |       |     | 130   |
| 9  | 356   | 29 | 338   | 44 |       |   |       | ret | 132   |
| 10 | 356   | 5  | 337   | 35 |       |   |       |     | 134   |
| 11 | 355   | 41 | 336   | 17 | di    |   |       |     | 137   |
| 12 | 355   | 16 | 334   | 49 |       |   |       |     | 139   |
| 13 | 354   | 51 | 333   | 10 |       |   | per   | 48  | 141   |
| 14 | 354   | 25 | 331   | 12 |       |   |       | 51  | 144   |
| 15 | 353   | 59 | 328   | 49 |       |   |       | 30  | 146   |
| 16 | 353   | 33 | 325   | 34 |       |   |       | 63  | 148   |
| 17 | 353   | 7  | 317   | 54 |       |   |       | 45  | 150   |
| 18 | 352   | 40 | Hic   |    |       |   |       | 8   | 153   |
| 19 | 352   | 12 |       |    |       |   |       | 72  | 155   |
| 20 | 351   | 44 |       |    |       |   |       | 75  | 157   |
| 21 | 351   | 15 |       |    | a     |   |       | 43  | 159   |
| 22 | 350   | 46 |       |    |       |   |       | 9   | 162   |
| 23 | 350   | 16 | ar    |    |       |   |       | 25  | 164   |
| 24 | 349   | 45 |       |    |       |   |       | 31  | 166   |
| 25 | 349   | 12 |       |    |       |   |       | 34  | 168   |
| 26 | 348   | 39 |       |    |       |   |       | 37  | 171   |
| 27 | 348   | 4  |       |    | ci    |   | ad    | 56  | 173   |
| 28 | 347   | 29 | cus   |    |       |   |       | 102 | 175   |
| 29 | 346   | 52 |       |    |       |   |       | 105 | 177   |
| 30 | 346   | 14 |       |    |       |   |       | 107 | 180   |

Arcus zodiaci part. 42. 46. scr. utrinque ab initio ♊ semper extat supra horizonem.  
 Cum 12. partib. 46. scr. ascendunt 45. tempora 14. scr. æquinoctialis, ac inde immediate ascendunt partes zodiaci, quæ sequuntur partes 12. 46. scr. ♋.



## AD LATITVDINEM 73. GRADVS

|    | ♈     | ♉  | ♊     | ♋  | ♌     | ♍     |
|----|-------|----|-------|----|-------|-------|
|    | temp. | /  | temp. | /  | temp. | /     |
| 0  | 180   | 0  | 249   | 34 |       |       |
| 1  | 182   | 13 | 252   | 7  |       |       |
| 2  | 184   | 26 | 254   | 45 | cus   | ci    |
| 3  | 186   | 38 | 257   | 23 |       |       |
| 4  | 188   | 52 | 260   | 4  |       |       |
| 5  | 191   | 6  | 262   | 49 |       |       |
| 6  | 193   | 20 | 265   | 38 |       |       |
| 7  | 195   | 33 | 268   | 30 | zo    | tet   |
| 8  | 197   | 48 | 271   | 26 |       |       |
| 9  | 200   | 3  | 274   | 29 |       |       |
| 10 | 202   | 17 | 277   | 35 |       |       |
| 11 | 204   | 33 | 280   | 51 |       |       |
| 12 | 206   | 48 | 284   | 17 | fem   |       |
| 13 | 209   | 4  | 287   | 56 |       | 42 6  |
| 14 | 211   | 21 | 291   | 52 |       | 34 26 |
| 15 | 213   | 38 | 296   | 15 |       | 31 11 |
| 16 | 216   | 55 | 301   | 30 |       | 28 48 |
| 17 | 219   | 13 | 311   | 9  |       | 26 50 |
| 18 | 220   | 32 | Hic   |    |       | 25 11 |
| 19 | 222   | 51 |       |    |       | 23 43 |
| 20 | 225   | 12 |       |    | di    | 22 25 |
| 21 | 227   | 32 |       |    |       | 21 16 |
| 22 | 229   | 54 |       |    |       | 20 11 |
| 23 | 232   | 17 |       |    |       | 19 11 |
| 24 | 234   | 41 |       |    | per   | 18 17 |
| 25 | 237   | 7  | ar    |    |       | 17 23 |
| 26 | 239   | 34 |       |    |       | 16 35 |
| 27 | 242   | 2  |       |    |       | 15 49 |
| 28 | 244   | 31 |       |    | a     | 15 6  |
| 29 | 247   | 2  |       |    |       | 14 25 |
| 30 | 249   | 34 |       |    |       | 13 46 |

Arcus zodiaci part. 42. 46. scrup. utrinque ab initio ♋ semper latet infra Horizon.  
 Cum 17. partib. 14. scrup. ♍ ascendunt 3. 4. tempora 46. scr. æquin. ac inde im medi-  
 ate ascendunt partes zodiaci, quæ antecedunt partes 17. 14. scr. 8.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♄     |    | II    |   | ♅     |   | ♆     |    | ♇     |   | ♈     |    | ♉     |
|----|-------|----|-------|----|-------|---|-------|---|-------|----|-------|---|-------|----|-------|
|    | temp. | /  | temp. | /  | temp. | / | temp. | / | temp. | /  | temp. | / | temp. | /  | temp. |
| 0  | 360   | 0  | 342   | 48 |       |   |       |   |       |    |       |   | 106   | 59 |       |
| 1  | 359   | 32 | 341   | 55 | a     |   | fem   |   | pa    |    |       |   | 109   | 43 |       |
| 2  | 359   | 4  | 340   | 59 |       |   |       |   |       |    |       |   | 112   | 26 |       |
| 3  | 358   | 35 | 340   | 0  |       |   |       |   |       |    |       |   | 115   | 6  |       |
| 4  | 358   | 7  | 338   | 57 |       |   |       |   |       |    |       |   | 117   | 43 |       |
| 5  | 357   | 38 | 337   | 49 |       |   |       |   |       |    |       |   | 120   | 19 |       |
| 6  | 357   | 8  | 336   | 34 |       |   |       |   |       |    |       |   | 122   | 52 |       |
| 7  | 356   | 40 | 335   | 14 |       |   | per   |   |       |    |       |   | 125   | 24 |       |
| 8  | 356   | 11 | 333   | 45 | ci    |   |       |   |       |    |       |   | 127   | 54 |       |
| 9  | 355   | 42 | 332   | 4  |       |   |       |   |       |    |       |   | 130   | 24 |       |
| 10 | 355   | 12 | 330   | 16 |       |   |       |   |       |    |       |   | 132   | 53 |       |
| 11 | 354   | 42 | 327   | 51 |       |   |       |   |       |    |       |   | 135   | 20 |       |
| 12 | 354   | 12 | 324   | 55 |       |   |       |   |       |    |       |   | 137   | 46 |       |
| 13 | 353   | 40 | 320   | 38 |       |   |       |   | ret   |    |       |   | 140   | 12 |       |
| 14 | 353   | 10 |       |    |       |   |       |   |       |    |       |   | 142   | 37 |       |
| 15 | 352   | 38 | Hic   |    |       |   |       |   |       |    |       |   | 145   | 1  |       |
| 16 | 352   | 5  |       |    |       |   |       |   |       |    |       |   | 147   | 24 |       |
| 17 | 351   | 32 |       |    | ar    |   |       |   | 59    | 32 |       |   | 149   | 46 |       |
| 18 | 350   | 58 |       |    |       |   |       |   | 65    | 49 |       |   | 152   | 8  |       |
| 19 | 350   | 23 | zo    |    |       |   |       |   | 70    | 43 |       |   | 154   | 29 |       |
| 20 | 349   | 48 |       |    |       |   |       |   | 74    | 59 |       |   | 156   | 49 |       |
| 21 | 349   | 12 |       |    |       |   |       |   | 78    | 52 |       |   | 159   | 10 |       |
| 22 | 348   | 34 |       |    |       |   | ad    |   | 82    | 29 |       |   | 161   | 29 |       |
| 23 | 347   | 57 |       |    |       |   |       |   | 85    | 55 |       |   | 163   | 49 |       |
| 24 | 347   | 18 |       |    |       |   |       |   | 89    | 12 |       |   | 166   | 8  |       |
| 25 | 346   | 38 |       |    |       |   |       |   | 92    | 23 |       |   | 168   | 27 |       |
| 26 | 345   | 55 |       |    | cus   |   |       |   | 95    | 27 |       |   | 170   | 46 |       |
| 27 | 345   | 12 |       |    |       |   |       |   | 98    | 26 |       |   | 173   | 5  |       |
| 28 | 344   | 26 | di    |    |       |   |       |   | 101   | 21 |       |   | 175   | 24 |       |
| 29 | 343   | 38 |       |    |       |   |       |   | 104   | 12 |       |   | 177   | 42 |       |
| 30 | 342   | 48 |       |    |       |   |       |   | 106   | 59 |       |   | 180   | 0  |       |

Acus zodiaci part. 46. 12. scr. utrinque ab initio ♄ semper extat supra horizontem.  
 Cum 16. parte. 12. scr. ascendunt 48. tempora 39. scr. æ quinoctialis, ac inde immediate ascendunt partes zodiaci, quæ sequuntur partes 16. 12. scr. ♄.



## AD LATITVDINEM 74. GRADVS

|    | ♌     |    | ♍     |    | ♎     |   | ♏     |   | ♐     |   | ♑     |   | ♒     |    | ♓     |    | ♈     |
|----|-------|----|-------|----|-------|---|-------|---|-------|---|-------|---|-------|----|-------|----|-------|
|    | temp. | /  | temp. | /  | temp. | / | temp. | / | temp. | / | temp. | / | temp. | /  | temp. | /  | temp. |
| 0  | 180   | 0  | 253   | 1  |       |   |       |   |       |   |       |   |       |    | 17    | 12 |       |
| 1  | 182   | 18 | 255   | 48 |       |   |       |   |       |   |       |   |       |    | 16    | 22 |       |
| 2  | 184   | 36 | 258   | 39 |       |   | a     |   |       |   | fem   |   |       |    | 15    | 34 |       |
| 3  | 186   | 55 | 261   | 34 |       |   |       |   |       |   |       |   |       |    | 14    | 48 |       |
| 4  | 189   | 14 | 264   | 33 |       |   |       |   |       |   |       |   |       |    | 14    | 5  |       |
| 5  | 191   | 33 | 267   | 37 |       |   |       |   |       |   |       |   |       |    | 13    | 22 |       |
| 6  | 193   | 52 | 270   | 48 |       |   |       |   |       |   |       |   |       |    | 12    | 42 |       |
| 7  | 196   | 11 | 274   | 5  |       |   |       |   |       |   |       |   |       |    | 12    | 3  |       |
| 8  | 198   | 31 | 277   | 31 |       |   |       |   |       |   |       |   |       |    | 11    | 26 |       |
| 9  | 200   | 50 | 281   | 8  |       |   |       |   |       |   |       |   |       |    | 10    | 48 |       |
| 10 | 203   | 11 | 285   | 1  |       |   |       |   |       |   |       |   |       |    | 10    | 12 |       |
| 11 | 205   | 31 | 289   | 17 |       |   |       |   |       |   |       |   |       |    | 9     | 37 |       |
| 12 | 207   | 52 | 294   | 11 |       |   |       |   |       |   |       |   |       |    | 9     | 2  |       |
| 13 | 210   | 14 | 300   | 28 |       |   | ci    |   |       |   |       |   |       |    | 8     | 28 |       |
| 14 | 212   | 36 |       |    |       |   |       |   |       |   | per   |   |       |    | 7     | 55 |       |
| 15 | 214   | 59 |       |    |       |   | Hic   |   |       |   |       |   |       |    | 7     | 22 |       |
| 16 | 217   | 23 |       |    |       |   |       |   |       |   |       |   |       |    | 6     | 50 |       |
| 17 | 219   | 48 |       |    |       |   |       |   |       |   |       |   | 39    | 22 | 6     | 20 |       |
| 18 | 222   | 14 |       |    |       |   |       |   |       |   |       |   | 35    | 5  | 5     | 48 |       |
| 19 | 224   | 40 |       |    |       |   |       |   |       |   |       |   | 32    | 9  | 5     | 18 |       |
| 20 | 227   | 7  |       |    |       |   | zo    |   |       |   | ar    |   | 29    | 50 | 4     | 48 |       |
| 21 | 229   | 36 |       |    |       |   |       |   |       |   |       |   | 27    | 56 | 4     | 18 |       |
| 22 | 232   | 6  |       |    |       |   |       |   |       |   |       |   | 26    | 15 | 3     | 49 |       |
| 23 | 234   | 36 |       |    |       |   |       |   |       |   |       |   | 24    | 46 | 3     | 20 |       |
| 24 | 237   | 8  |       |    |       |   |       |   |       |   |       |   | 23    | 26 | 2     | 52 |       |
| 25 | 239   | 41 |       |    |       |   |       |   |       |   |       |   | 22    | 11 | 2     | 22 |       |
| 26 | 242   | 17 |       |    |       |   |       |   |       |   |       |   | 21    | 3  | 1     | 53 |       |
| 27 | 244   | 54 |       |    |       |   |       |   |       |   |       |   | 20    | 0  | 1     | 25 |       |
| 28 | 247   | 34 |       |    |       |   | di    |   |       |   |       |   | 19    | 1  | 0     | 56 |       |
| 29 | 250   | 17 |       |    |       |   |       |   |       |   | cus   |   | 18    | 5  | 0     | 28 |       |
| 30 | 253   | 1  |       |    |       |   |       |   |       |   |       |   | 17    | 12 | 0     | 0  |       |

Arcus zodiaci partium 46. 12. scr. utrinq; ab initio ♋. semper latet sub horizontem.  
 Cum 13. parte. 48. scr. ♍. ascendunt 311. tempora 21. scr. æquinoctialis, ac inde im-  
 mediate ascendunt partes zodiaci, quæ antecedunt 13. partes 48 scr. ♎.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♄     |    | II    | ♅     | ♆     | ♇     | ♈     |
|----|-------|----|-------|----|-------|-------|-------|-------|-------|
|    | temp. |    | temp. |    | temp. | temp. | temp. | temp. | temp. |
| 0  | 360   | 0  | 338   | 36 |       |       |       | 102   | 47    |
| 1  | 359   | 26 | 337   | 24 | 20    | fem   |       | 105   | 46    |
| 2  | 358   | 52 | 336   | 9  |       |       | pa    | 108   | 44    |
| 3  | 358   | 18 | 334   | 46 |       |       |       | 111   | 38    |
| 4  | 357   | 44 | 333   | 16 |       |       |       | 114   | 28    |
| 5  | 257   | 9  | 331   | 36 |       |       |       | 117   | 16    |
| 6  | 256   | 34 | 329   | 42 |       |       |       | 120   | 2     |
| 7  | 255   | 58 | 327   | 32 |       |       |       | 122   | 44    |
| 8  | 355   | 23 | 324   | 55 |       |       |       | 125   | 25    |
| 9  | 354   | 48 | 321   | 33 |       |       |       | 128   | 4     |
| 10 | 354   | 11 | 316   | 23 |       |       |       | 130   | 41    |
| 11 | 353   | 35 | Hic   |    |       | per   |       | 133   | 16    |
| 12 | 352   | 58 |       |    |       |       |       | 135   | 51    |
| 13 | 352   | 21 |       |    | di    |       |       | 138   | 24    |
| 14 | 351   | 43 |       |    |       |       |       | 140   | 57    |
| 15 | 351   | 4  |       |    |       |       |       | 143   | 27    |
| 16 | 350   | 25 |       |    |       |       |       | 145   | 57    |
| 17 | 349   | 44 |       |    |       |       |       | 148   | 26    |
| 18 | 349   | 2  |       |    |       |       | ret   | 150   | 54    |
| 19 | 348   | 20 |       |    |       |       | 61    | 13    | 153   |
| 20 | 347   | 36 |       |    |       |       | 68    | 20    | 155   |
| 21 | 346   | 51 | ar    |    |       |       | 73    | 40    | 158   |
| 22 | 346   | 5  |       |    | a     |       | 78    | 13    | 160   |
| 23 | 345   | 17 |       |    |       |       | 82    | 20    | 163   |
| 24 | 344   | 27 |       |    |       |       | 86    | 10    | 165   |
| 25 | 343   | 34 |       |    |       |       | 89    | 46    | 167   |
| 26 | 342   | 41 |       |    |       | ad    | 93    | 12    | 170   |
| 27 | 341   | 42 |       |    |       |       | 96    | 31    | 172   |
| 28 | 340   | 44 |       |    |       |       | 99    | 41    | 175   |
| 29 | 339   | 42 | cus   |    | ci    |       | 102   | 47    | 177   |
| 30 | 338   | 36 |       |    |       |       |       |       | 180   |

Arcus zodiaci partium 49. 27. scr. utr inq ab initio ♄. semper extrat super horizon-  
tem. Cum 19. parte. 27. scr. ♄ ascendunt tempora 51. scr. 52. æquinoctialis, ac inde  
immediate ascendunt partes zodiaci, quæ sequuntur partes 19. 27. scr. ♈



## AD LATITVDINEM 75. GRADVS

|    | ♈     |    | ♉     |    | ♊     |   | ♋     |   | ♌     |    | ♍     |   | ♎     |    | ♏     |
|----|-------|----|-------|----|-------|---|-------|---|-------|----|-------|---|-------|----|-------|
|    | temp. | /  | temp. | /  | temp. | / | temp. | / | temp. | /  | temp. | / | temp. | /  | temp. |
| 0  | 180   | 0  | 257   | 13 |       |   |       |   |       |    |       |   | 21    | 24 |       |
| 1  | 182   | 24 | 260   | 19 | aci   |   | fem   |   | tet   |    |       |   | 20    | 18 |       |
| 2  | 184   | 48 | 263   | 29 |       |   |       |   |       |    |       |   | 19    | 16 |       |
| 3  | 187   | 12 | 266   | 48 |       |   |       |   |       |    |       |   | 18    | 18 |       |
| 4  | 189   | 37 | 270   | 14 |       |   |       |   |       |    |       |   | 17    | 19 |       |
| 5  | 192   | 2  | 273   | 50 |       |   |       |   | infra |    |       |   | 16    | 26 |       |
| 6  | 194   | 27 | 277   | 40 |       |   |       |   |       |    |       |   | 15    | 33 |       |
| 7  | 196   | 53 | 281   | 47 |       |   |       |   |       |    |       |   | 14    | 43 |       |
| 8  | 199   | 18 | 286   | 20 |       |   |       |   |       |    |       |   | 13    | 55 |       |
| 9  | 201   | 44 | 291   | 40 |       |   |       |   |       |    |       |   | 13    | 9  |       |
| 10 | 204   | 11 | 298   | 47 |       |   |       |   |       |    |       |   | 12    | 24 |       |
| 11 | 206   | 38 | Hic   |    |       |   |       |   |       |    |       |   | 11    | 40 |       |
| 12 | 209   | 6  |       |    |       |   |       |   | ter   |    |       |   | 10    | 58 |       |
| 13 | 211   | 34 |       |    | ar    |   | per   |   |       |    |       |   | 10    | 16 |       |
| 14 | 214   | 3  |       |    |       |   |       |   |       |    |       |   | 9     | 35 |       |
| 15 | 216   | 33 |       |    |       |   |       |   |       |    |       |   | 8     | 56 |       |
| 16 | 219   | 3  |       |    |       |   |       |   |       |    |       |   | 8     | 17 |       |
| 17 | 221   | 36 |       |    |       |   |       |   |       |    |       |   | 7     | 39 |       |
| 18 | 224   | 9  |       |    |       |   |       |   | ram   |    |       |   | 7     | 2  |       |
| 19 | 226   | 44 | zo    |    |       |   |       |   |       |    |       |   | 6     | 25 |       |
| 20 | 229   | 19 |       |    |       |   |       |   | 43    | 37 |       |   | 5     | 49 |       |
| 21 | 231   | 56 |       |    |       |   |       |   | 38    | 27 |       |   | 5     | 12 |       |
| 22 | 234   | 35 |       |    |       |   |       |   | 35    | 5  |       |   | 4     | 37 |       |
| 23 | 237   | 16 |       |    |       |   |       |   | 32    | 28 |       |   | 4     | 2  |       |
| 24 | 239   | 58 |       |    |       |   |       |   | 30    | 18 |       |   | 3     | 26 |       |
| 25 | 242   | 44 |       |    |       |   |       |   | 28    | 24 |       |   | 2     | 51 |       |
| 26 | 245   | 32 |       |    |       |   |       |   | 26    | 44 |       |   | 2     | 16 |       |
| 27 | 248   | 22 |       |    | cus   |   | la    |   | 25    | 14 |       |   | 1     | 42 |       |
| 28 | 251   | 16 | di    |    |       |   |       |   | 23    | 51 |       |   | 1     | 8  |       |
| 29 | 254   | 14 |       |    |       |   |       |   | 22    | 36 |       |   | 0     | 34 |       |
| 30 | 257   | 13 |       |    |       |   |       |   | 21    | 24 |       |   | 0     | 0  |       |

Arcus zodiaci partium 49. scr. 27. utrinque ab initio ♊. semper latet sub horizonte. Cum 10. part. 33. scr. m ascendunt 308. tempora, 8. scr. æquinoctialis, ac inde imma mediate ascendunt partes zodiaci, quæ antecedunt partes 10. 33. scr. ☿.



# TABVLA ASCENSIONVM OBLIQVARVM

| V     |     | ♈     |     | ♊     |    | ♉     |   | ♈     |     | ♊     |    |
|-------|-----|-------|-----|-------|----|-------|---|-------|-----|-------|----|
| temp. | /   | temp. | /   | temp. | /  | temp. | / | temp. | /   | temp. | /  |
| 0     | 360 | 0     | 333 | 20    | a  | cus   |   |       |     | 97    | 31 |
| 1     | 359 | 20    | 331 | 40    |    |       |   |       | ad  | 100   | 56 |
| 2     | 358 | 39    | 329 | 50    |    |       |   |       |     | 104   | 14 |
| 3     | 357 | 58    | 327 | 45    |    |       |   |       |     | 107   | 27 |
| 4     | 357 | 16    | 325 | 22    |    |       |   |       |     | 110   | 34 |
| 5     | 356 | 35    | 322 | 28    |    |       |   |       |     | 113   | 37 |
| 6     | 355 | 54    | 318 | 42    |    |       |   |       |     | 116   | 36 |
| 7     | 355 | 11    | 312 | 41    |    |       |   |       |     | 119   | 33 |
| 8     | 354 | 29    |     |       |    |       |   |       |     | 122   | 26 |
| 9     | 353 | 46    | Hic |       |    |       |   |       |     | 125   | 17 |
| 10    | 353 | 3     |     |       |    |       |   |       | pa  | 128   | 5  |
| 11    | 352 | 19    |     |       |    | fem   |   |       |     | 130   | 51 |
| 12    | 351 | 34    |     |       | ci |       |   |       |     | 133   | 35 |
| 13    | 350 | 48    |     |       |    |       |   |       |     | 136   | 17 |
| 14    | 350 | 1     |     |       |    |       |   |       |     | 138   | 57 |
| 15    | 349 | 14    |     |       |    |       |   |       |     | 141   | 37 |
| 16    | 348 | 26    |     |       |    |       |   |       |     | 144   | 16 |
| 17    | 347 | 37    |     |       |    |       |   |       |     | 146   | 54 |
| 18    | 346 | 47    | zo  |       |    |       |   |       |     | 149   | 30 |
| 19    | 345 | 54    |     |       |    |       |   |       |     | 152   | 6  |
| 20    | 345 | 0     |     |       |    |       |   |       |     | 154   | 41 |
| 21    | 344 | 5     |     |       |    |       |   |       | ret | 157   | 14 |
| 22    | 343 | 6     |     |       |    |       |   |       |     | 159   | 48 |
| 23    | 342 | 6     |     |       |    |       |   | 63    | 22  | 162   | 20 |
| 24    | 341 | 2     |     |       |    |       |   | 71    | 20  | 164   | 53 |
| 25    | 339 | 56    |     |       |    |       |   | 77    | 2   | 167   | 25 |
| 26    | 338 | 46    |     |       | ar |       |   | 81    | 52  | 169   | 56 |
| 27    | 337 | 33    |     |       |    |       |   | 86    | 11  | 172   | 27 |
| 28    | 336 | 14    | di  |       |    |       |   | 90    | 12  | 174   | 59 |
| 29    | 334 | 50    |     |       |    |       |   | 93    | 56  | 177   | 29 |
| 30    | 333 | 20    |     |       |    |       |   | 97    | 31  | 180   | 0  |

Arcus zodiaci part. 52. 35. scr. utrinq; ab initio ♉ semper extat supra horizontem. Cum 22. parte 35. scr. ♊ ascendunt 54. tempora 57. scr. æquinoctialis, ac inde imma mediate ascendunt partes zodiaci, quæ sequuntur partes 22. 35. scr. ♈.



## AD LATITVDINEM 76. GRADVS

|    | ♈     |    | ♍     |    | ♊     |   | ♋     |   | ♌     |    | ♎     |    |
|----|-------|----|-------|----|-------|---|-------|---|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | / | temp. | / | temp. | /  | temp. | /  |
| 0  | 180   | 0  | 262   | 29 |       |   |       |   |       |    | 26    | 40 |
| 1  | 182   | 31 | 266   | 4  | ci    |   | per   |   | fra   |    | 25    | 10 |
| 2  | 185   | 1  | 269   | 48 |       |   |       |   |       |    | 23    | 46 |
| 3  | 187   | 33 | 273   | 49 |       |   |       |   |       |    | 22    | 27 |
| 4  | 190   | 4  | 278   | 8  |       |   |       |   |       |    | 21    | 14 |
| 5  | 192   | 35 | 282   | 58 |       |   |       |   |       |    | 20    | 4  |
| 6  | 195   | 7  | 288   | 40 |       |   |       |   |       |    | 18    | 58 |
| 7  | 197   | 40 | 296   | 38 |       |   |       |   |       |    | 17    | 54 |
| 8  | 200   | 12 |       |    |       |   |       |   |       |    | 16    | 54 |
| 9  | 202   | 46 | Hic   |    |       |   |       |   |       |    | 15    | 55 |
| 10 | 205   | 19 |       |    |       |   |       |   |       |    | 15    | 0  |
| 11 | 207   | 54 |       |    | ar    |   | la    |   | ter   |    | 14    | 6  |
| 12 | 210   | 30 |       |    |       |   |       |   |       |    | 13    | 13 |
| 13 | 213   | 6  |       |    |       |   |       |   |       |    | 12    | 23 |
| 14 | 215   | 44 | zo    |    |       |   |       |   |       |    | 11    | 34 |
| 15 | 218   | 23 |       |    |       |   |       |   |       |    | 10    | 46 |
| 16 | 221   | 3  |       |    |       |   |       |   |       |    | 9     | 59 |
| 17 | 223   | 43 |       |    |       |   |       |   |       |    | 9     | 12 |
| 18 | 226   | 25 |       |    |       |   |       |   |       |    | 8     | 26 |
| 19 | 229   | 9  |       |    |       |   |       |   |       |    | 7     | 41 |
| 20 | 231   | 55 |       |    | cus   |   | tet   |   | ram   |    | 6     | 57 |
| 21 | 234   | 43 |       |    |       |   |       |   |       |    | 6     | 14 |
| 22 | 237   | 34 | di    |    |       |   |       |   |       |    | 5     | 31 |
| 23 | 240   | 27 |       |    |       |   |       |   | 47    | 19 | 4     | 49 |
| 24 | 243   | 24 |       |    |       |   |       |   | 42    | 18 | 4     | 6  |
| 25 | 246   | 23 |       |    |       |   |       |   | 37    | 32 | 3     | 25 |
| 26 | 249   | 26 |       |    |       |   |       |   | 34    | 38 | 2     | 44 |
| 27 | 252   | 33 |       |    |       |   |       |   | 32    | 15 | 2     | 2  |
| 28 | 255   | 46 |       |    | fem   |   | in    |   | 30    | 10 | 1     | 21 |
| 29 | 259   | 4  | a     |    |       |   |       |   | 28    | 20 | 0     | 40 |
| 30 | 262   | 29 |       |    |       |   |       |   | 26    | 40 | 0     | 0  |

Arcus zodiaci part. 52. 35. scrup. utrinq; ab initio ♋ semper later sub Horizonte.  
 Cum 7. part. 25. scrup. ♍ ascendunt 305. tempora 3. scr. æquinoct. ac inde immedi-  
 ate ascendunt partes zodiaci, quæ antecedunt partes 7. 25. scr. ♋.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♄     |    | II    |   | ♅     |   | ♆     |    | ♇     |    |
|----|-------|----|-------|----|-------|---|-------|---|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | / | temp. | / | temp. | /  | temp. | /  |
| 0  | 360   | 0  | 326   | 15 |       |   |       |   |       |    | 90    | 26 |
| 1  | 359   | 12 | 323   | 40 | 20    |   | fem   |   | pa    |    | 94    | 35 |
| 2  | 358   | 24 | 320   | 34 |       |   |       |   |       |    | 98    | 29 |
| 3  | 357   | 35 | 316   | 31 |       |   |       |   |       |    | 102   | 10 |
| 4  | 356   | 46 | 310   | 3  |       |   |       |   |       |    | 105   | 43 |
| 5  | 355   | 56 | Hic   |    |       |   |       |   |       |    | 109   | 9  |
| 6  | 355   | 7  |       |    |       |   |       |   |       |    | 112   | 29 |
| 7  | 354   | 17 |       |    |       |   |       |   |       |    | 115   | 42 |
| 8  | 353   | 26 |       |    |       |   |       |   |       |    | 118   | 52 |
| 9  | 352   | 35 |       |    | di    |   | per   |   |       |    | 121   | 58 |
| 10 | 351   | 44 |       |    |       |   |       |   |       |    | 125   | 0  |
| 11 | 350   | 51 |       |    |       |   |       |   |       |    | 127   | 59 |
| 12 | 349   | 57 |       |    |       |   |       |   |       |    | 130   | 56 |
| 13 | 349   | 2  |       |    |       |   |       |   |       |    | 133   | 50 |
| 14 | 348   | 6  | ar    |    |       |   |       |   |       |    | 136   | 41 |
| 15 | 347   | 8  |       |    |       |   |       |   |       |    | 139   | 31 |
| 16 | 346   | 10 |       |    |       |   |       |   |       |    | 142   | 20 |
| 17 | 345   | 9  |       |    |       |   |       |   | ret   |    | 145   | 7  |
| 18 | 344   | 7  |       |    |       |   |       |   |       |    | 147   | 53 |
| 19 | 343   | 3  |       |    | a     |   |       |   |       |    | 150   | 37 |
| 20 | 341   | 56 |       |    |       |   |       |   |       |    | 153   | 21 |
| 21 | 340   | 45 |       |    |       |   |       |   |       |    | 156   | 3  |
| 22 | 339   | 32 |       |    |       |   |       |   |       |    | 158   | 44 |
| 23 | 338   | 15 |       |    |       |   |       |   |       |    | 161   | 26 |
| 24 | 336   | 55 |       |    |       |   |       |   |       |    | 164   | 6  |
| 25 | 335   | 28 | cus   |    |       |   |       |   | 66    | 33 | 166   | 46 |
| 26 | 333   | 56 |       |    |       |   |       |   |       |    | 169   | 25 |
| 27 | 332   | 17 |       |    |       |   | ad    |   | 74    | 57 | 172   | 5  |
| 28 | 330   | 29 |       |    | ci    |   |       |   | 80    | 5  | 174   | 43 |
| 29 | 328   | 29 |       |    |       |   |       |   | 85    | 56 | 177   | 22 |
| 30 | 326   | 15 |       |    |       |   |       |   | 90    | 26 | 180   | 0  |

Arcus zodiaci part. 55. 37. scr. utrinq; ab initio ♄ semper extat supra horizontem.  
 Cum 28. part. 37. scr. ☊ ascendunt 57. tempora 54. scr. æquinoctialis, ac inde immedie  
 diate ascendunt partes zodiaci, quæ sequuntur partes 25. 37. scr. ♄.



## AD LATITVDINEM 77. GRADVS.

|    | ♈     |    | ♍     |    | ♊     |   | ♋     |    | ♎     |   | ♏     |
|----|-------|----|-------|----|-------|---|-------|----|-------|---|-------|
|    | temp. | /  | temp. | /  | temp. | / | temp. | /  | temp. | / | temp. |
| 0  | 180   | 0  | 269   | 34 | a     |   | sem   |    | in    |   | 33 45 |
| 1  | 182   | 38 | 274   | 4  |       |   |       |    |       |   | 31 31 |
| 2  | 185   | 17 | 279   | 5  |       |   |       |    |       |   | 29 31 |
| 3  | 187   | 55 | 285   | 3  |       |   |       |    |       |   | 27 43 |
| 4  | 190   | 35 | 293   | 27 |       |   |       |    |       |   | 26 4  |
| 5  | 193   | 14 | Hic   |    |       |   |       |    |       |   | 24 32 |
| 6  | 195   | 54 |       |    |       |   |       |    |       |   | 23 5  |
| 7  | 198   | 34 |       |    |       |   |       |    |       |   | 21 45 |
| 8  | 201   | 16 |       |    |       |   |       |    |       |   | 20 28 |
| 9  | 203   | 57 |       |    | ci    |   | per   |    | fra   |   | 19 15 |
| 10 | 206   | 39 |       |    |       |   |       |    |       |   | 18 4  |
| 11 | 209   | 23 |       |    |       |   |       |    |       |   | 16 57 |
| 12 | 212   | 7  |       |    |       |   |       |    |       |   | 15 53 |
| 13 | 214   | 53 | zo    |    |       |   |       |    |       |   | 14 51 |
| 14 | 217   | 40 |       |    |       |   |       |    |       |   | 13 50 |
| 15 | 220   | 29 |       |    |       |   |       |    |       |   | 12 52 |
| 16 | 223   | 19 |       |    |       |   |       |    |       |   | 11 54 |
| 17 | 226   | 10 |       |    |       |   |       |    |       |   | 10 58 |
| 18 | 229   | 4  |       |    |       |   |       |    |       |   | 10 3  |
| 19 | 232   | 1  |       |    |       |   |       |    |       |   | 9 9   |
| 20 | 235   | 0  |       |    | ar    |   |       |    |       |   | 8 16  |
| 21 | 238   | 2  |       |    |       |   | la    |    | ter   |   | 7 25  |
| 22 | 241   | 8  |       |    |       |   |       |    |       |   | 6 34  |
| 23 | 244   | 18 |       |    |       |   |       |    | ram   |   | 5 43  |
| 24 | 247   | 31 |       |    |       |   |       |    |       |   | 4 53  |
| 25 | 250   | 51 | di    |    |       |   |       | 49 | 57    |   | 4 4   |
| 26 | 254   | 17 |       |    |       |   |       | 43 | 29    |   | 3 14  |
| 27 | 257   | 50 |       |    |       |   | tet   | 39 | 26    |   | 2 25  |
| 28 | 261   | 21 |       |    | cus   |   |       | 36 | 20    |   | 1 36  |
| 29 | 265   | 25 |       |    |       |   |       | 33 | 45    |   | 0 48  |
| 30 | 269   | 34 |       |    |       |   |       |    |       |   | 0 0   |

Arcus zodiaci part. 55. 37. scrup. utrinque ab initio ♋ semper latet sub Horizonte.  
 Cum 4. part. 23. scrup. ♍ ascendunt 202. tempora 6. scr. æquinoct. ac inde immedi-  
 ate ascendunt partes zodiaci, quæ antecedunt partes 4. 23. scr. ♎.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     | ♄     | ♂     | ♂     | ♂     | ♂     | ♂     | ♂     |
|----|-------|-------|-------|-------|-------|-------|-------|-------|
|    | temp. | temp. | temp. | temp. | temp. | temp. | temp. | temp. |
| 0  | 360   | 0     | 314   | 59    | zo    | fem   | pa    | 79    |
| 1  | 359   | 3     | 308   | 30    |       |       |       | 85    |
| 2  | 358   | 5     |       |       |       |       |       | 90    |
| 3  | 357   | 8     | Hic   |       |       |       |       | 95    |
| 4  | 356   | 10    |       |       |       |       |       | 99    |
| 5  | 355   | 11    |       |       |       |       |       | 103   |
| 6  | 354   | 11    |       |       |       |       |       | 107   |
| 7  | 353   | 11    |       |       |       |       |       | 110   |
| 8  | 352   | 11    |       |       | di    |       |       | 114   |
| 9  | 351   | 10    |       |       |       |       |       | 117   |
| 10 | 350   | 9     |       |       |       |       |       | 121   |
| 11 | 349   | 6     |       |       |       |       |       | 124   |
| 12 | 348   | 2     | ar    |       |       | per   |       | 127   |
| 13 | 346   | 56    |       |       |       |       |       | 130   |
| 14 | 345   | 48    |       |       |       |       |       | 133   |
| 15 | 344   | 37    |       |       |       |       |       | 137   |
| 16 | 343   | 25    |       |       |       |       |       | 140   |
| 17 | 342   | 10    |       |       |       |       |       | 143   |
| 18 | 340   | 54    |       |       |       |       | ret   | 145   |
| 19 | 339   | 33    |       |       | a     |       |       | 148   |
| 20 | 338   | 10    |       |       |       |       |       | 151   |
| 21 | 336   | 41    |       |       |       |       |       | 154   |
| 22 | 335   | 7     | cus   |       |       |       |       | 157   |
| 23 | 333   | 27    |       |       |       |       |       | 160   |
| 24 | 331   | 41    |       |       |       |       |       | 163   |
| 25 | 329   | 43    |       |       |       |       |       | 166   |
| 26 | 327   | 35    |       |       |       | ad    |       | 168   |
| 27 | 325   | 11    |       |       | ci    |       |       | 171   |
| 28 | 322   | 26    |       |       |       |       |       | 174   |
| 29 | 319   | 10    |       |       |       |       | 70    | 177   |
| 30 | 314   | 59    |       |       |       |       | 79    | 180   |

Arcus zo diaci part. 58. 32. scr. utrinq; ab initio ♂ semper extat supra horiz ontem.  
 Cum 28. part. 32. scr. ♀ ascendunt 60. tempora 41. scr. æquinoctialis, ac inde immedia-  
 tate ascendunt partes zodiaci, quæ sequuntur partes 28. 32. scr. ♀.



## AD LATITVDINEM 78. GRADVS.

|    | ♈     |    | ♎     |    | ♊     |   | ♋     |   | ♌     |    | ♍     |
|----|-------|----|-------|----|-------|---|-------|---|-------|----|-------|
|    | temp. | /  | temp. | /  | temp. | / | temp. | / | temp. | /  | temp. |
| 0  | 180   | 0  | 280   | 50 |       |   | fem   |   | in    |    | 45    |
| 1  | 182   | 47 | 289   | 13 | a     |   |       |   |       |    | 40    |
| 2  | 185   | 35 |       |    |       |   |       |   |       |    | 37    |
| 3  | 188   | 23 | Hic   |    |       |   |       |   |       |    | 34    |
| 4  | 191   | 11 |       |    |       |   |       |   |       |    | 32    |
| 5  | 194   | 0  |       |    |       |   |       |   |       |    | 30    |
| 6  | 196   | 50 |       |    |       |   |       |   |       |    | 28    |
| 7  | 199   | 40 |       |    |       |   |       |   |       |    | 26    |
| 8  | 202   | 30 |       |    |       |   |       |   |       |    | 24    |
| 9  | 205   | 21 |       |    |       |   | per   |   | fra   |    | 23    |
| 10 | 208   | 14 |       |    |       |   |       |   |       |    | 21    |
| 11 | 211   | 7  |       |    | ci    |   |       |   |       |    | 20    |
| 12 | 214   | 2  |       |    |       |   |       |   |       |    | 19    |
| 13 | 216   | 59 | zo    |    |       |   |       |   |       |    | 17    |
| 14 | 219   | 58 |       |    |       |   |       |   |       |    | 16    |
| 15 | 223   | 0  |       |    |       |   |       |   |       |    | 15    |
| 16 | 226   | 4  |       |    |       |   |       |   |       |    | 14    |
| 17 | 229   | 9  |       |    |       |   |       |   |       |    | 13    |
| 18 | 232   | 18 |       |    |       |   |       |   |       |    | 11    |
| 19 | 235   | 30 |       |    | ar    |   |       |   |       |    | 10    |
| 20 | 238   | 46 |       |    |       |   |       |   |       |    | 9     |
| 21 | 242   | 7  |       |    |       |   | la    |   | ter   |    | 8     |
| 22 | 245   | 33 |       |    |       |   |       |   |       |    | 7     |
| 23 | 249   | 6  |       |    |       |   |       |   |       |    | 6     |
| 24 | 252   | 45 | di    |    |       |   |       |   |       |    | 5     |
| 25 | 256   | 36 |       |    |       |   |       |   |       |    | 4     |
| 26 | 260   | 38 |       |    |       |   |       |   |       |    | 3     |
| 27 | 264   | 55 |       |    |       |   |       |   | ram   |    | 2     |
| 28 | 269   | 34 |       |    |       |   |       |   |       |    | 1     |
| 29 | 274   | 44 |       |    | cus   |   | tet   |   |       | 51 | 30    |
| 30 | 280   | 50 |       |    |       |   |       |   |       | 45 | 1     |

Arcus zodiaci partium 58. 32. scr. utrinq; ab initio ♋ . semper latet sub horizonte.  
 Cum 1. part. 28. scr. ♎ ascendunt 299. tempora, 19. scr. æquinoctialis, ac inde ima  
 mediate ascendunt partes zodiaci, quæ antecedunt partes 1. 28. scr. ♋.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♄     | II  | ♅     | ♆   | ♇     | ♈  |
|----|-------|----|-------|-----|-------|-----|-------|----|
|    | temp. | /  | temp. | /   | temp. | /   | temp. | /  |
| 0  | 360   | 0  |       |     |       |     |       |    |
| 1  | 358   | 53 | zo    | ar  | ad    | su  | ram   |    |
| 2  | 357   | 45 |       |     |       |     | 75    | 35 |
| 3  | 356   | 36 |       |     |       |     | 83    | 53 |
| 4  | 355   | 27 |       |     |       |     | 90    | 5  |
| 5  | 354   | 17 |       |     |       |     | 95    | 24 |
| 6  | 353   | 7  |       |     |       |     | 100   | 10 |
| 7  | 351   | 57 |       | cus |       |     | 104   | 26 |
| 8  | 350   | 45 |       |     |       |     | 108   | 45 |
| 9  | 349   | 33 | di    |     |       |     | 112   | 43 |
| 10 | 348   | 19 |       |     |       |     | 116   | 31 |
| 11 | 347   | 2  |       |     | pa    | pra | 120   | 12 |
| 12 | 345   | 44 |       |     |       |     | 123   | 46 |
| 13 | 344   | 25 |       |     |       |     | 127   | 13 |
| 14 | 343   | 2  |       |     |       |     | 130   | 38 |
| 15 | 341   | 36 |       | fem |       |     | 133   | 59 |
| 16 | 340   | 6  |       |     |       |     | 137   | 16 |
| 17 | 338   | 33 |       |     |       |     | 140   | 30 |
| 18 | 336   | 57 |       |     |       |     | 143   | 40 |
| 19 | 335   | 15 | a     |     |       |     | 146   | 49 |
| 20 | 333   | 26 |       |     |       |     | 149   | 56 |
| 21 | 331   | 31 |       |     | ret   |     | 153   | 1  |
| 22 | 329   | 25 |       |     |       |     | 156   | 4  |
| 23 | 327   | 8  |       |     |       |     | 159   | 6  |
| 24 | 324   | 36 |       |     |       |     | 162   | 6  |
| 25 | 321   | 43 |       |     |       | ter | 165   | 6  |
| 26 | 318   | 17 |       | per |       |     | 168   | 6  |
| 27 | 313   | 59 |       |     |       |     | 171   | 5  |
| 28 | 307   | 35 | ci    |     |       |     | 174   | 4  |
| 29 | Hic   |    |       |     |       |     | 177   | 2  |
| 30 |       |    |       |     |       |     | 180   | 0  |

Arcus zodiaci part. 61. 24. scr. utrinq; ab initio ♄ semper extat supra horizontem.  
 Cum 1. parte 24. scr. ♈ ascendunt 63. tempora 24. scr. æquinoctialis, ac inde imo  
 mediate ascendunt partes zodiaci, quæ sequuntur 1. partes 24. scr. ♈.



## AD LATITVDINEM 79. GRADVS

153

|    | ♌     | ♍  | ♎     | ♏   | ♐       | ♑     |
|----|-------|----|-------|-----|---------|-------|
|    | temp. | /  | temp. | /   | temp.   | /     |
| 0  | 180   | 0  |       |     |         |       |
| 1  | 182   | 58 | 20    |     | ci      |       |
| 2  | 185   | 56 |       |     | per     | fra   |
| 3  | 188   | 55 |       |     |         |       |
| 4  | 191   | 54 |       |     |         | 52 25 |
| 5  | 194   | 54 |       |     |         | 46 1  |
| 6  | 197   | 54 |       |     |         | 41 43 |
| 7  | 200   | 54 |       |     |         | 38 17 |
| 8  | 203   | 55 |       |     |         | 35 24 |
| 9  | 206   | 59 |       |     | ar      | 32 52 |
| 10 | 210   | 4  |       |     |         | 30 35 |
| 11 | 213   | 11 |       |     |         | 28 29 |
| 12 | 216   | 20 |       |     | ter     | 26 34 |
| 13 | 219   | 30 | di    |     | la      | 24 45 |
| 14 | 222   | 44 |       |     |         | 23 3  |
| 15 | 226   | 1  |       |     |         | 21 27 |
| 16 | 229   | 22 |       |     |         | 19 54 |
| 17 | 232   | 47 |       |     |         | 18 24 |
| 18 | 236   | 14 |       |     |         | 16 58 |
| 19 | 239   | 48 |       |     |         | 15 35 |
| 20 | 243   | 29 |       |     | cus tet | 14 16 |
| 21 | 247   | 17 |       |     |         | 12 58 |
| 22 | 251   | 15 |       |     |         | 11 41 |
| 23 | 255   | 24 |       |     |         | 10 27 |
| 24 | 259   | 50 |       |     |         | 9 15  |
| 25 | 264   | 36 |       |     |         | 8 3   |
| 26 | 269   | 55 |       |     | ram     | 6 53  |
| 27 | 276   | 7  |       |     |         | 5 43  |
| 28 | 284   | 25 | a     | sem |         | 4 33  |
| 29 |       |    |       |     |         | 3 24  |
| 30 | Hic   |    |       | in  |         | 2 15  |
|    |       |    |       |     |         | 1 7   |
|    |       |    |       |     |         | 0 0   |

Arcus zodiaci part. 61. 24. scrup. utrinq; ab initio ♐ semper latet sub Horizonte.  
 Cum 28. part. 36. scrup. ♌ ascendunt 296. tempora 36. scr. æquinoct. ac inde immedi-  
 ate ascendunt partes zodiaci, quæ antecedunt partes 28. part. 36. scr. V.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♄     |   | ♂     |   | ♊     |   | ♋     |   | ♌     |   | ♍     |     |
|----|-------|----|-------|---|-------|---|-------|---|-------|---|-------|---|-------|-----|
|    | temp. | /  | temp. | / | temp. | / | temp. | / | temp. | / | temp. | / | temp. | /   |
| 0  | 360   | 0  |       |   |       |   |       |   |       |   |       |   |       |     |
| 1  | 358   | 40 | zo    |   | ci    |   | fem   |   | pa    |   |       |   | ter   |     |
| 2  | 357   | 19 |       |   |       |   |       |   |       |   |       |   |       |     |
| 3  | 355   | 58 |       |   |       |   |       |   |       |   |       |   |       |     |
| 4  | 354   | 36 |       |   |       |   |       |   |       |   |       |   |       | ram |
| 5  | 353   | 13 |       |   |       |   |       |   |       |   |       |   | 81    | 15  |
| 6  | 351   | 50 |       |   |       |   |       |   |       |   |       |   | 89    | 12  |
| 7  | 350   | 25 |       |   |       |   |       |   |       |   |       |   | 95    | 26  |
| 8  | 348   | 59 |       |   |       |   |       |   |       |   |       |   | 100   | 50  |
| 9  | 347   | 32 |       |   |       |   |       |   |       |   |       |   | 105   | 44  |
| 10 | 346   | 2  |       |   | ar    |   | per   |   | ret   |   |       |   | 110   | 18  |
| 11 | 344   | 30 |       |   |       |   |       |   |       |   |       |   | 114   | 37  |
| 12 | 342   | 54 | di    |   |       |   |       |   |       |   |       |   | 118   | 43  |
| 13 | 341   | 16 |       |   |       |   |       |   |       |   |       |   | 122   | 40  |
| 14 | 339   | 34 |       |   |       |   |       |   |       |   |       |   | 126   | 30  |
| 15 | 337   | 49 |       |   |       |   |       |   |       |   |       |   | 130   | 12  |
| 16 | 335   | 58 |       |   |       |   |       |   |       |   |       |   | 133   | 48  |
| 17 | 334   | 0  |       |   |       |   |       |   |       |   |       |   | 137   | 21  |
| 18 | 331   | 55 |       |   |       |   |       |   |       |   |       |   | 140   | 51  |
| 19 | 329   | 40 |       |   |       |   |       |   |       |   |       |   | 144   | 17  |
| 20 | 327   | 14 |       |   |       |   |       |   | fu    |   |       |   | 147   | 40  |
| 21 | 324   | 32 |       |   |       |   |       |   |       |   |       |   | 151   | 0   |
| 22 | 321   | 30 |       |   |       |   |       |   |       |   |       |   | 154   | 18  |
| 23 | 317   | 58 |       |   | cus   |   |       |   |       |   |       |   | 157   | 34  |
| 24 | 314   | 38 | a     |   |       |   | ad    |   |       |   |       |   | 160   | 49  |
| 25 | 307   | 34 |       |   |       |   |       |   |       |   |       |   | 164   | 3   |
| 26 |       |    |       |   |       |   |       |   |       |   |       |   | 167   | 15  |
| 27 | Hic   |    |       |   |       |   |       |   |       |   |       |   | 170   | 27  |
| 28 |       |    |       |   |       |   |       |   | pra   |   |       |   | 173   | 39  |
| 29 |       |    |       |   |       |   |       |   |       |   |       |   | 176   | 50  |
| 30 |       |    |       |   |       |   |       |   |       |   |       |   | 180   | 0   |

Arcus zodiaci partium 64. 9. scr. utrinq; ab initio ♊. semper extat supra horizontem. Cum 4. part. 9. scr. X ascendunt 66. tempora, 2. scr. æquinoctialis, ac inde immedie ascendunt partes zodiaci, quæ sequuntur partes 4. 9. scr. ♍.



## AD LATITVDINEM 80. GRADVS

|    | ♈     | ♉     | ♊     | ♋     | ♌     | ♍     |
|----|-------|-------|-------|-------|-------|-------|
|    | temp. | temp. | temp. | temp. | temp. | temp. |
| 0  | 180   | 0     | zo    | ci    | per   | in    |
| 1  | 183   | 10    |       |       |       | ram   |
| 2  | 186   | 21    |       |       |       |       |
| 3  | 189   | 33    |       |       |       |       |
| 4  | 192   | 45    |       |       |       |       |
| 5  | 195   | 57    |       |       |       | 52 26 |
| 6  | 199   | 11    |       |       |       | 45 22 |
| 7  | 202   | 26    |       |       |       | 42 2  |
| 8  | 205   | 42    |       |       |       | 38 30 |
| 9  | 209   | 0     | di    | ar    | la    | 35 28 |
| 10 | 212   | 20    |       |       |       | 32 46 |
| 11 | 215   | 33    |       |       | fra   | 30 20 |
| 12 | 219   | 9     |       |       |       | 28 5  |
| 13 | 222   | 39    |       |       |       | 26 0  |
| 14 | 226   | 12    |       |       |       | 24 2  |
| 15 | 229   | 48    |       |       |       | 22 11 |
| 16 | 233   | 20    |       |       |       | 20 26 |
| 17 | 237   | 20    |       |       |       | 18 44 |
| 18 | 241   | 17    |       | cus   |       | 17 6  |
| 19 | 245   | 23    |       |       |       | 15 30 |
| 20 | 249   | 42    |       |       |       | 13 58 |
| 21 | 254   | 16    |       |       | tet   | 12 28 |
| 22 | 259   | 10    |       |       |       | 11 1  |
| 23 | 264   | 34    | a     |       | ter   | 9 35  |
| 24 | 270   | 48    |       |       |       | 8 10  |
| 25 | 278   | 45    |       |       |       | 6 47  |
| 26 |       |       |       |       |       | 5 24  |
| 27 | Hic   |       | fem   |       |       | 4 2   |
| 28 |       |       |       |       |       | 2 41  |
| 29 |       |       |       |       |       | 1 20  |
| 30 |       |       |       |       |       | 0 0   |

Arcus zodiaci part. 64. 9. scrup. utrinq; ab initio ♋ semper later sub Horizonte.  
 Cum 25. part. 51. scrup. ♈ ascendunt 293. tempora 58. scr. æquinoct. ac inde immedi-  
 ate ascendunt partes zodiaci, quæ antecedunt partes 25. 51. scr. V.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♈     |   | ♊     |   | ♉     |    | ♈     |   | ♊     |    |
|----|-------|----|-------|---|-------|---|-------|----|-------|---|-------|----|
|    | temp. | /  | temp. | / | temp. | / | temp. | /  | temp. | / | temp. | /  |
| 0  | 360   | 0  |       |   |       |   |       |    |       |   |       |    |
| 1  | 358   | 25 | di    |   | cus   |   | dit   |    | fem   |   | ter   |    |
| 2  | 356   | 49 |       |   |       |   |       |    |       |   |       |    |
| 3  | 355   | 12 |       |   |       |   |       |    |       |   |       |    |
| 4  | 353   | 34 |       |   |       |   |       |    |       |   |       |    |
| 5  | 351   | 55 |       |   |       |   |       |    |       |   |       |    |
| 6  | 350   | 15 |       |   |       |   |       |    |       |   | ram   |    |
| 7  | 348   | 33 | a     |   | non   |   | fed   |    |       |   | 74    | 32 |
| 8  | 346   | 50 |       |   |       |   |       |    | per   |   | 87    | 18 |
| 9  | 345   | 3  |       |   |       |   |       |    |       |   | 95    | 2  |
| 10 | 343   | 13 |       |   |       |   |       |    |       |   | 101   | 18 |
| 11 | 341   | 19 |       |   |       |   |       |    |       |   | 106   | 49 |
| 12 | 339   | 22 |       |   |       |   |       |    |       |   | 111   | 52 |
| 13 | 337   | 21 |       |   |       |   |       |    |       |   | 116   | 35 |
| 14 | 335   | 13 |       |   |       |   |       |    |       |   | 121   | 4  |
| 15 | 332   | 56 |       |   |       |   |       |    |       |   | 125   | 19 |
| 16 | 330   | 32 |       |   |       |   |       | ex |       |   | 129   | 27 |
| 17 | 327   | 55 | ci    |   | oc    |   |       |    | fu    |   | 133   | 26 |
| 18 | 325   | 4  |       |   |       |   |       |    |       |   | 137   | 18 |
| 19 | 322   | 2  |       |   |       |   |       |    |       |   | 141   | 6  |
| 20 | 318   | 14 |       |   |       |   |       |    |       |   | 144   | 51 |
| 21 | 313   | 50 |       |   |       |   |       |    |       |   | 148   | 31 |
| 22 | 307   | 58 |       |   |       |   |       |    |       |   | 152   | 8  |
| 23 | 297   | 5  |       |   |       |   |       |    |       |   | 155   | 42 |
| 24 | Hic   |    |       |   |       |   |       |    |       |   | 159   | 14 |
| 25 |       |    |       |   |       |   |       |    |       |   | 162   | 44 |
| 26 |       |    |       |   |       |   |       |    |       |   | 166   | 14 |
| 27 |       |    | ar    |   | ci    |   | tat   |    | pra   |   | 169   | 42 |
| 28 |       |    |       |   |       |   |       |    |       |   | 173   | 9  |
| 29 | zo    |    |       |   |       |   |       |    |       |   | 176   | 35 |
| 30 |       |    |       |   |       |   |       |    |       |   | 180   | 0  |

Arcus zodiaci part. 66. 52. scr. utrinq; ab initio ♉ semper extat supra horizontem. Cum 6. parte 52. scr. ♈ ascendunt 68. 36. scr. æquinoctialis, ac inde immediate ascendunt partes zodiaci, quæ sequuntur partes 6. 52. scr. ♊.



## AD LATITVDINEM 81. GRADVS.

|    | ♌     | ♍     | ♎     | ♏     | ♐     | ♑     |
|----|-------|-------|-------|-------|-------|-------|
|    | temp. | temp. | temp. | temp. | temp. | temp. |
| 0  | 180   | 0     | di    | cus   | fed   | per   |
| 1  | 183   | 25    |       |       |       |       |
| 2  | 186   | 51    |       |       |       |       |
| 3  | 190   | 18    |       |       |       |       |
| 4  | 193   | 46    |       |       |       |       |
| 5  | 197   | 16    |       |       |       |       |
| 6  | 200   | 46    |       |       |       |       |
| 7  | 204   | 18    |       | non   | la    | 62 55 |
| 8  | 207   | 52    | a     |       |       | 52 2  |
| 9  | 211   | 29    |       |       | sub   | 46 10 |
| 10 | 215   | 9     |       |       |       | 41 46 |
| 11 | 218   | 54    |       |       |       | 37 58 |
| 12 | 222   | 42    |       |       |       | 34 56 |
| 13 | 226   | 34    |       |       |       | 32 5  |
| 14 | 230   | 33    |       |       |       | 29 28 |
| 15 | 234   | 41    |       |       |       | 27 4  |
| 16 | 238   | 56    |       | ori   | tet   | 24 47 |
| 17 | 243   | 25    |       |       |       | 22 39 |
| 18 | 248   | 8     | ci    |       |       | 20 38 |
| 19 | 253   | 11    |       |       |       | 18 41 |
| 20 | 258   | 42    |       |       |       | 16 47 |
| 21 | 264   | 58    |       |       |       | 14 57 |
| 22 | 272   | 42    |       |       |       | 13 10 |
| 23 | 285   | 28    |       |       |       | 11 27 |
| 24 |       |       |       |       | ter   | 9 45  |
| 25 | Hic   |       |       |       |       | 8 5   |
| 26 |       |       |       |       |       | 6 26  |
| 27 |       |       | tur   | sem   |       | 4 48  |
| 28 |       |       |       |       |       | 3 11  |
| 29 |       |       | ar    |       |       | 1 35  |
| 30 | zo    |       |       |       |       | 0 0   |

Arcus zodiaci partium 66. 52. scr. utrinque ab initio ♏. semper later sub horizonte.  
 Cum 23. part. 8. scr. ♌ ascendunt 291. tempora, 24. scr. æquinoctialis, ac inde im-  
 mediate ascendunt partes zodiaci, quæ antecedunt partes 23. 8. scr. V.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♄     |   | ♂     |   | ♄     |   | ♂     |   | ♄     |    |
|----|-------|----|-------|---|-------|---|-------|---|-------|---|-------|----|
|    | temp. | /  | temp. | / | temp. | / | temp. | / | temp. | / | temp. | /  |
| 0  | 360   | 0  |       |   |       |   |       |   |       |   |       |    |
| 1  | 358   | 5  | di    |   | cus   |   | dī    |   | fem   |   | ter   |    |
| 2  | 356   | 10 |       |   |       |   |       |   |       |   |       |    |
| 3  | 354   | 13 |       |   |       |   |       |   |       |   |       |    |
| 4  | 352   | 15 |       |   |       |   |       |   |       |   |       |    |
| 5  | 350   | 16 |       |   |       |   |       |   |       |   |       |    |
| 6  | 348   | 15 |       |   |       |   |       |   |       |   |       |    |
| 7  | 346   | 11 |       |   |       |   |       |   |       |   |       |    |
| 8  | 344   | 5  | a     |   | non   |   | fed   |   | per   |   | ram   |    |
| 9  | 341   | 54 |       |   |       |   |       |   |       |   |       |    |
| 10 | 339   | 37 |       |   |       |   |       |   |       |   | 83    | 29 |
| 11 | 337   | 16 |       |   |       |   |       |   |       |   | 93    | 8  |
| 12 | 334   | 48 |       |   |       |   |       |   |       |   | 101   | 28 |
| 13 | 332   | 11 |       |   |       |   |       |   |       |   | 107   | 39 |
| 14 | 329   | 23 |       |   |       |   |       |   |       |   | 113   | 28 |
| 15 | 326   | 18 |       |   |       |   |       |   |       |   | 118   | 40 |
| 16 | 322   | 56 |       |   |       |   |       |   |       |   | 123   | 37 |
| 17 | 318   | 59 | ci    |   | oc    |   | ex    |   | fu    |   | 128   | 16 |
| 18 | 314   | 39 |       |   |       |   |       |   |       |   | 132   | 44 |
| 19 | 309   | 11 |       |   |       |   |       |   |       |   | 137   | 3  |
| 20 | 300   | 24 |       |   |       |   |       |   |       |   | 141   | 15 |
| 21 |       |    |       |   |       |   |       |   |       |   | 145   | 22 |
| 22 | Hic   |    |       |   |       |   |       |   |       |   | 149   | 23 |
| 23 |       |    |       |   |       |   |       |   |       |   | 153   | 20 |
| 24 |       |    |       |   |       |   |       |   |       |   | 157   | 14 |
| 25 |       |    |       |   |       |   |       |   |       |   | 161   | 5  |
| 26 |       |    |       |   | ci    |   |       |   |       |   | 164   | 55 |
| 27 | zo    |    | ar    |   |       |   | tat   |   | pra   |   | 168   | 43 |
| 28 |       |    |       |   |       |   |       |   |       |   | 172   | 30 |
| 29 |       |    |       |   |       |   |       |   |       |   | 176   | 15 |
| 30 |       |    |       |   |       |   |       |   |       |   | 180   | 0  |

Arcus zodiaci part. 69 . 33 . scr. utrinq; ab initio ♄ semper extat super horizont.  
 Cum 9. part. 33 . scr. ♄ ascendunt 71 . tempora. 7 . scr. æquinoctialis, ac inde ima  
 mediate ascendunt partes zodiaci, quæ sequuntur partes 9.33. scr. ♄.



## AD LATITVDINEM 82. GRADVS.

|    | ♈     | ♉     | ♊     | ♋     | ♌     | ♍     |
|----|-------|-------|-------|-------|-------|-------|
|    | temp. | temp. | temp. | temp. | temp. | temp. |
| 0  | 180   | 0     |       |       | per   | zon   |
| 1  | 183   | 45    | di    | cus   | fed   |       |
| 2  | 187   | 30    |       |       |       |       |
| 3  | 191   | 17    |       |       |       |       |
| 4  | 195   | 5     |       |       |       |       |
| 5  | 198   | 55    |       |       |       |       |
| 6  | 202   | 46    |       |       |       |       |
| 7  | 206   | 40    | a     |       |       |       |
| 8  | 210   | 37    |       | non   | la    | te    |
| 9  | 214   | 38    |       |       | sub   |       |
| 10 | 218   | 45    |       |       |       | 59 36 |
| 11 | 222   | 57    |       |       |       | 50 49 |
| 12 | 227   | 16    |       |       |       | 45 21 |
| 13 | 231   | 44    |       |       |       | 41 1  |
| 14 | 236   | 23    |       |       |       | 37 4  |
| 15 | 241   | 20    |       |       |       | 33 42 |
| 16 | 246   | 32    |       | ori   | tet   | 30 37 |
| 17 | 252   | 21    | ci    |       |       | 27 49 |
| 18 | 258   | 32    |       |       | ho    | 25 12 |
| 19 | 256   | 52    |       |       |       | 22 44 |
| 20 | 276   | 31    |       |       |       | 20 23 |
| 21 |       |       |       |       |       | 18 6  |
| 22 | Hic   |       |       |       |       | 15 55 |
| 23 |       |       |       |       |       | 13 49 |
| 24 |       |       |       |       |       | 11 45 |
| 25 |       |       |       |       |       | 9 44  |
| 26 |       |       |       |       |       | 7 45  |
| 27 | zo    | ar    | tur   | fem   | ri    | 5 47  |
| 28 |       |       |       |       |       | 3 50  |
| 29 |       |       |       |       |       | 1 55  |
| 30 |       |       |       |       |       | 0 0   |

Arcus zodiaci part. 69. 33. scr. utrinq; ab initio ♋ semper latet sub horizonte.  
 Cum 20. part. 27. scr. ♌ ascendunt tempora 288. 53. scr. æquinoctialis, ac inde im-  
 mediate ascendunt partes zodiaci, quæ antecedunt partes 20. 27. scr. V.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♄     | II    | ♊     | ♋     | ♌     | ♍     |
|----|-------|----|-------|-------|-------|-------|-------|-------|
|    | temp. |    | temp. | temp. | temp. | temp. | temp. | temp. |
| c  | 360   | 0  | di    | cus   | tur   | sem   | Ho    |       |
| 1  | 357   | 41 |       |       |       |       |       |       |
| 2  | 355   | 20 |       |       |       |       |       |       |
| 3  | 352   | 58 |       |       |       |       |       |       |
| 4  | 350   | 35 |       |       |       |       |       |       |
| 5  | 348   | 9  |       |       |       |       |       |       |
| 6  | 345   | 40 |       |       |       |       |       |       |
| 7  | 343   | 6  |       |       |       |       |       |       |
| 8  | 340   | 28 |       |       | fed   | per   | ri    |       |
| 9  | 337   | 42 | a     | non   |       |       | zon   |       |
| 10 | 334   | 48 |       |       |       |       |       |       |
| 11 | 331   | 43 |       |       |       |       | tem   |       |
| 12 | 328   | 27 |       |       |       |       | 91    | 34    |
| 13 | 324   | 45 |       |       |       |       | 101   | 10    |
| 14 | 320   | 51 |       |       |       |       | 108   | 27    |
| 15 | 316   | 14 |       |       |       |       | 115   | 5     |
| 16 | 310   | 38 |       |       |       |       | 120   | 50    |
| 17 | 302   | 54 |       | o     | ex    | sup   | 126   | 23    |
| 18 |       |    |       |       |       |       | 131   | 30    |
| 19 | Hic   |    | ci    |       |       |       | 136   | 26    |
| 20 |       |    |       |       |       |       | 141   | 10    |
| 21 |       |    |       |       |       |       | 145   | 47    |
| 22 |       |    |       |       |       |       | 150   | 15    |
| 23 |       |    |       |       |       |       | 154   | 39    |
| 24 |       |    |       |       |       |       | 158   | 58    |
| 25 | zo    |    |       |       |       |       | 163   | 15    |
| 26 |       |    | ar    | ri    | tat   | pra   | 167   | 28    |
| 27 |       |    |       |       |       |       | 171   | 40    |
| 28 |       |    |       |       |       |       | 175   | 51    |
| 29 |       |    |       |       |       |       | 180   | 0     |
| 30 |       |    |       |       |       |       |       |       |

Arcus zodiaci part. 72. 11. scr. utrinque ab initio ♊ semper extat supra horizontem.  
 Cum 12. part. 11. scr. ♋ ascendunt 73. tempora 34. scr. æquinoctialis, ac inde immediate ascendunt partes zodiaci, quæ sequuntur partes 12. 11. scr. ♍.



## AD LATITVDINEM 83. GRADVS.

|    | ♌     | ♍     | ♎     | ♏     | ♐     | ♑        |
|----|-------|-------|-------|-------|-------|----------|
|    | temp. | temp. | temp. | temp. | temp. | temp.    |
| 0  | 180   | 0     | di    | cus   | fed   | per zon  |
| 1  | 184   | 9     |       |       |       |          |
| 2  | 188   | 20    |       |       |       |          |
| 3  | 192   | 32    |       |       |       |          |
| 4  | 196   | 45    |       |       |       |          |
| 5  | 201   | 2     |       |       |       |          |
| 6  | 205   | 21    |       |       |       |          |
| 7  | 209   | 45    |       |       |       |          |
| 8  | 214   | 13    | 2     | non   | la    | sub te   |
| 9  | 218   | 50    |       |       |       |          |
| 10 | 223   | 54    |       |       |       |          |
| 11 | 228   | 30    |       |       |       |          |
| 12 | 233   | 27    |       |       |       |          |
| 13 | 239   | 10    |       |       |       | 57 6     |
| 14 | 244   | 55    |       |       |       | 49 22    |
| 15 | 251   | 33    |       |       |       | 43 46    |
| 16 | 258   | 50    |       |       |       | 39 9     |
| 17 | 268   | 26    | ci    | ori   | tet   | Ho 35 15 |
| 18 |       |       |       |       |       | 31 33    |
| 19 | Hic   |       |       |       |       | 28 17    |
| 20 |       |       |       |       |       | 25 12    |
| 21 |       |       |       |       |       | 22 18    |
| 22 |       |       |       |       |       | 19 32    |
| 23 |       |       |       |       |       | 16 54    |
| 24 |       |       |       |       |       | 14 20    |
| 25 |       |       |       |       |       | 11 51    |
| 26 | zo    | ar    | tur   | sem   | ri    | 9 25     |
| 27 |       |       |       |       |       | 7 2      |
| 28 |       |       |       |       |       | 4 40     |
| 29 |       |       |       |       |       | 2 19     |
| 30 |       |       |       |       |       | 0 0      |

Arcus zodiaci part. 72. 11. scr. utrinq; ab initio ♏ semper latet sub horizonte.  
 Cum 17. part. 49. scr. ♌ ascendunt 286. tempora 26. scr. æquinoctialis, ac inde im-  
 mediate ascendunt partes zodiaci, quæ antecedunt partes 17. 49. scr. V.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     |    | ♈     | II    | ♊      | ♋     | ♌     | ♍      |
|----|-------|----|-------|-------|--------|-------|-------|--------|
|    | temp. |    | temp. | temp. | temp.  | temp. | temp. | temp.  |
| 0  | 360   | 0  |       |       |        |       |       |        |
| 1  | 357   | 8  | di    | cus   | fed    | fu    | zon   |        |
| 2  | 354   | 13 |       |       |        |       |       |        |
| 3  | 351   | 18 |       |       |        |       |       |        |
| 4  | 348   | 21 |       |       |        |       |       |        |
| 5  | 345   | 18 |       |       |        |       |       |        |
| 6  | 342   | 9  |       |       |        |       |       |        |
| 7  | 338   | 54 |       |       |        |       |       |        |
| 8  | 335   | 29 |       |       |        |       |       |        |
| 9  | 331   | 50 | a     | non   | ex     | pra   |       |        |
| 10 | 327   | 56 |       |       |        |       |       |        |
| 11 | 323   | 38 |       |       |        |       |       | tem    |
| 12 | 318   | 47 |       |       |        |       |       |        |
| 13 | 313   | 6  |       |       |        |       |       |        |
| 14 | 305   | 46 |       |       |        |       |       |        |
| 15 | 293   | 16 |       |       |        |       |       | 85 39  |
| 16 |       |    |       |       |        |       |       | 100 0  |
| 17 | Hic   |    | ci    | ori   | tat    | Ho    |       | 109 11 |
| 18 |       |    |       |       |        |       |       | 116 43 |
| 19 |       |    |       |       |        |       |       | 123 25 |
| 20 |       |    |       |       |        |       |       | 129 33 |
| 21 |       |    |       |       |        |       |       | 135 18 |
| 22 |       |    |       |       |        |       |       | 140 47 |
| 23 |       |    |       |       |        |       |       | 146 3  |
| 24 |       |    |       |       |        |       |       | 151 8  |
| 25 |       |    |       |       |        |       |       | 156 7  |
| 26 | zo    |    | ar    | tur   | semper | ri    |       | 161 0  |
| 27 |       |    |       |       |        |       |       | 165 48 |
| 28 |       |    |       |       |        |       |       | 170 33 |
| 29 |       |    |       |       |        |       |       | 175 19 |
| 30 |       |    |       |       |        |       |       | 180 0  |

Arcus zodiaci part. 74. 47. scrup. utrinque ab initio ♊ semper extat supra Horizonte. Cum 14. part. 47. scrup. ♈ ascendunt 75. tempora 59. scr. æquinoct. ac inde immediate ascendunt partes zodiaci, quæ sequuntur partes 14. 47. scr. ♍.



## AD LATITVDINEM 84. GRADVS.

|    | ♈     | ♉     | ♊     | ♋     | ♌     | ♍     | ♎     |
|----|-------|-------|-------|-------|-------|-------|-------|
|    | temp. | temp. | temp. | temp. | temp. | temp. | temp. |
| 0  | 180   | 0     | di    | cus   | tur   | fem   | ho    |
| 1  | 184   | 41    |       |       |       |       |       |
| 2  | 189   | 27    |       |       |       |       |       |
| 3  | 194   | 12    |       |       |       |       |       |
| 4  | 199   | 0     |       |       |       |       |       |
| 5  | 203   | 53    |       |       |       |       | ri    |
| 6  | 208   | 52    |       |       |       |       |       |
| 7  | 213   | 57    |       |       | fed   | per   |       |
| 8  | 219   | 13    |       |       |       |       |       |
| 9  | 224   | 42    |       |       |       |       |       |
| 10 | 230   | 27    | a     | non   |       |       |       |
| 11 | 236   | 35    |       |       |       |       | zon   |
| 12 | 243   | 17    |       |       |       |       |       |
| 13 | 250   | 49    |       |       |       |       | tem   |
| 14 | 260   | 0     |       |       |       |       |       |
| 15 | 274   | 21    |       |       | la    | in    | 66 44 |
| 16 |       |       |       |       |       |       | 54 14 |
| 17 | Hic   | ci    |       |       |       |       | 46 54 |
| 18 |       |       |       |       |       |       | 41 13 |
| 19 |       |       |       | o     |       |       | 36 22 |
| 20 |       |       |       |       |       |       | 32 4  |
| 21 |       |       |       |       |       |       | 28 10 |
| 22 |       |       |       |       |       |       | 24 31 |
| 23 |       |       |       |       |       |       | 21 6  |
| 24 |       |       |       |       | ter   | fra   | 17 51 |
| 25 | zo    |       |       |       |       |       | 14 42 |
| 26 |       | ar    |       |       |       |       | 11 39 |
| 27 |       |       | ri    |       |       |       | 8 42  |
| 28 |       |       |       |       |       |       | 5 47  |
| 29 |       |       |       |       |       |       | 2 52  |
| 30 |       |       |       |       |       |       | 0 0   |

Arcus zodiaci part. 74. 47. scr. utrinque ab initio ♋ semper latet sub horizonte.  
 Cum 15. part. 13. scr. ♊ ascendunt tempora 284. 1. scr. æquinoctialis, ac inde im-  
 mediate ascendunt partes zodiaci, quæ antecedunt partes 15. 13. scr. V.



# TABVLA ASCENSIONVM OBLIQVAVM

|    | V     |    | ♈     |   | ♊     |   | ♉     |   | ♈     |   | ♊     |        |
|----|-------|----|-------|---|-------|---|-------|---|-------|---|-------|--------|
|    | temp. | /  | temp. | / | temp. | / | temp. | / | temp. | / | temp. | /      |
| 0  | 360   | 0  | di    |   | -cus  |   | fed   |   | per   |   | ri    |        |
| 1  | 356   | 22 |       |   |       |   |       |   |       |   |       |        |
| 2  | 352   | 42 |       |   |       |   |       |   |       |   |       |        |
| 3  | 348   | 58 |       |   |       |   |       |   |       |   |       |        |
| 4  | 345   | 10 |       |   |       |   |       |   |       |   |       |        |
| 5  | 341   | 12 |       |   |       |   |       |   |       |   |       |        |
| 6  | 337   | 4  |       |   |       |   |       |   |       |   |       |        |
| 7  | 332   | 41 |       |   |       |   |       |   |       |   |       |        |
| 8  | 327   | 58 |       |   | non   |   | ex    |   |       |   |       |        |
| 9  | 322   | 44 |       |   |       |   |       |   | su    |   | zon   |        |
| 10 | 316   | 47 |       |   |       |   |       |   |       |   |       |        |
| 11 | 310   | 30 |       |   |       |   |       |   |       |   |       |        |
| 12 | 299   | 2  | a     |   |       |   |       |   |       |   |       |        |
| 13 |       |    |       |   |       |   |       |   |       |   |       |        |
| 14 | Hic   |    |       |   |       |   |       |   |       |   |       |        |
| 15 |       |    |       |   |       |   |       |   |       |   |       |        |
| 16 |       |    |       |   |       |   |       |   |       |   | tem   |        |
| 17 |       |    |       |   |       |   |       |   |       |   |       |        |
| 18 |       |    |       |   |       |   |       |   | rat   |   | pra   | 96 58  |
| 19 |       |    |       |   | ori   |   |       |   |       |   |       | 109 16 |
| 20 |       |    |       |   |       |   |       |   |       |   |       | 118 24 |
| 21 |       |    | ci    |   |       |   |       |   |       |   |       | 126 12 |
| 22 |       |    |       |   |       |   |       |   |       |   |       | 133 17 |
| 23 |       |    |       |   |       |   |       |   |       |   |       | 139 50 |
| 24 |       |    |       |   |       |   |       |   |       |   |       | 146 3  |
| 25 | zo    |    |       |   |       |   |       |   |       |   |       | 152 1  |
| 26 |       |    |       |   |       |   |       |   |       |   |       | 157 49 |
| 27 |       |    | ar    |   | tur   |   | sem   |   | ho    |   |       | 163 27 |
| 28 |       |    |       |   |       |   |       |   |       |   |       | 169 2  |
| 29 |       |    |       |   |       |   |       |   |       |   |       | 174 32 |
| 30 |       |    |       |   |       |   |       |   |       |   |       | 180 0  |

Arcus zodiaci 77. part. 21 . scr . utrinq; ab initio ♉ semper extat super horizont.  
 Cum 17. part. 29. scr. ♈ ascendunt 78. tempora. 22. scr. æquinoctialis, ac inde im-  
 mediate ascendunt partes zodiaci, quæ sequuntur partes 17. 21. scr. ♊.



## AD LATITVDINEM 85. GRADVS

|    | ♈     | ♉     | ♊     | ♋     | ♌     | ♍     | ♎     |
|----|-------|-------|-------|-------|-------|-------|-------|
|    | temp. | temp. | temp. | temp. | temp. | temp. | temp. |
| 0  | 180   | 0     |       |       |       |       |       |
| 1  | 185   | 28    | a     | non   | sed   | per   | zon   |
| 2  | 190   | 58    |       |       |       |       |       |
| 3  | 196   | 33    |       |       |       |       |       |
| 4  | 202   | 11    |       |       |       |       |       |
| 5  | 207   | 59    |       |       |       |       |       |
| 6  | 213   | 57    |       |       |       |       |       |
| 7  | 220   | 10    |       |       |       |       |       |
| 8  | 226   | 43    |       |       |       |       |       |
| 9  | 233   | 48    | ci    | o     | la    | sub   |       |
| 10 | 241   | 36    |       |       |       |       |       |
| 11 | 250   | 44    |       |       |       |       | te    |
| 12 | 263   | 2     |       |       |       |       |       |
| 13 |       |       |       |       |       |       |       |
| 14 | Hic   |       |       |       |       |       |       |
| 15 |       |       |       |       |       |       |       |
| 16 |       |       |       |       |       |       |       |
| 17 |       | ar    | ri    | tet   | ho    | 60    | 58    |
| 18 |       |       |       |       |       | 49    | 30    |
| 19 |       |       |       |       |       | 43    | 13    |
| 20 |       |       |       |       |       | 37    | 16    |
| 21 | zo    |       |       |       |       | 32    | 2     |
| 22 |       |       |       |       |       | 27    | 19    |
| 23 |       |       |       |       |       | 22    | 56    |
| 24 |       |       |       |       |       | 18    | 48    |
| 25 |       |       |       |       |       | 14    | 50    |
| 26 |       |       |       |       |       | 11    | 2     |
| 27 |       | cus   | tur   | fem   | ri    | 7     | 18    |
| 28 | di    |       |       |       |       | 3     | 38    |
| 29 |       |       |       |       |       | 0     | 0     |
| 30 |       |       |       |       |       |       |       |

Arcus zodiaci 77. part. 21. scrup. utrinque ab initio ♋ semper latet sub Horizonte.  
 Cum 12. part. 39. scrup. ♈ ascendunt 281. tempora 38. scr. æquinoct. ac inde immedi-  
 ate ascendunt partes zodiaci, quæ antecedunt partes 12. 39. scr. V.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     | ♄     | II    | ♅     | ♆     | ♇     |
|----|-------|-------|-------|-------|-------|-------|
|    | temp. | temp. | temp. | temp. | temp. | temp. |
| 0  | 360   | 0     |       |       |       |       |
| 1  | 355   | 13    | a     | non   | fed   | per   |
| 2  | 350   | 22    |       |       |       | ri    |
| 3  | 345   | 24    |       |       |       |       |
| 4  | 340   | 18    |       |       |       |       |
| 5  | 334   | 49    |       |       |       |       |
| 6  | 328   | 56    |       |       |       |       |
| 7  | 322   | 24    |       |       |       |       |
| 8  | 314   | 48    |       |       |       |       |
| 9  | 304   | 56    |       |       |       | zon   |
| 10 | 286   | 44    | ci    | o     | ex    | fu    |
| 11 |       |       |       |       |       |       |
| 12 | Hic   |       |       |       |       |       |
| 13 |       |       |       |       |       |       |
| 14 |       |       |       |       |       |       |
| 15 |       |       |       |       |       |       |
| 16 |       |       |       |       |       |       |
| 17 |       |       |       |       |       | tem   |
| 18 |       |       |       |       |       |       |
| 19 |       |       | ar    | ri    |       | 88    |
| 20 | zo    |       |       |       | rat   | 22    |
| 21 |       |       |       |       | pra   | 108   |
| 22 |       |       |       |       |       | 24    |
| 23 |       |       |       |       |       | 120   |
| 24 |       |       |       |       |       | 6     |
| 25 |       |       |       |       |       | 129   |
| 26 |       |       |       |       |       | 32    |
| 27 |       |       |       |       |       | 137   |
| 28 |       |       |       |       |       | 55    |
| 29 |       |       |       |       |       | 145   |
| 30 |       |       |       |       |       | 39    |
|    |       |       |       |       |       | 152   |
|    |       |       |       |       |       | 58    |
|    |       |       |       |       |       | 159   |
|    |       |       |       |       |       | 54    |
|    |       |       |       |       |       | 166   |
|    |       |       |       |       |       | 42    |
|    |       |       |       |       |       | 173   |
|    |       |       |       |       |       | 23    |
|    |       |       |       |       |       | 180   |
|    |       |       |       |       |       | 0     |

Arcus zodiaci 79. part. 55 . scr. utrinq; ab initio ♄ semper extat supra horizont.  
 Cum 19. part. 55 . scr. ♄ ascendunt 80. tempora. 44. scr. æquinoctialis, ac inde ima  
 mediate ascendunt partes zodiaci, quæ sequuntur partes 19. 55. scr. ♄.



## AD LATITVDINEM 86. GRADVVM

|    | ♈     | ♉     | ♊     | ♋     | ♌     | ♍     |
|----|-------|-------|-------|-------|-------|-------|
|    | temp. | temp. | temp. | temp. | temp. | temp. |
| 0  | 180   | 0     |       | fed   | per   | zon   |
| 1  | 186   | 37    | a     | non   |       |       |
| 2  | 193   | 18    |       |       |       |       |
| 3  | 200   | 6     |       |       |       |       |
| 4  | 207   | 2     |       |       |       |       |
| 5  | 214   | 21    |       |       |       |       |
| 6  | 222   | 5     |       |       |       |       |
| 7  | 230   | 28    |       |       |       |       |
| 8  | 239   | 54    |       |       |       |       |
| 9  | 251   | 36    | ori   |       | sub   |       |
| 10 | 271   | 38    | ci    |       |       |       |
| 11 | Hic   |       |       |       |       |       |
| 12 |       |       |       |       |       |       |
| 13 |       |       |       |       |       |       |
| 14 |       |       |       |       |       |       |
| 15 |       |       |       |       |       |       |
| 16 |       |       |       |       |       |       |
| 17 |       |       |       |       |       |       |
| 18 |       |       |       | tet   | ho    | te    |
| 19 | zo    | ar    |       |       |       | 73 16 |
| 20 |       |       |       |       |       | 55 4  |
| 21 |       |       | tur   |       |       | 45 12 |
| 22 |       |       |       |       |       | 37 36 |
| 23 |       |       |       |       |       | 31 4  |
| 24 |       |       |       |       |       | 25 11 |
| 25 |       |       |       |       |       | 19 42 |
| 26 |       |       |       | fem   | ri    | 14 36 |
| 27 | di    | cus   |       |       |       | 9 38  |
| 28 |       |       |       |       |       | 4 47  |
| 29 |       |       |       |       |       | 0 0   |
| 30 |       |       |       |       |       |       |

Ar. cus zodiaci partium 79 . 55 . scr. utrinq; ab initio ♋. semper later sub horizonte.  
 Cum 10. part. 5. scr. ♈ ascendunt 279. tempora, 16. scr. æquinoctialis, ac inde immedie  
 diate ascendunt partes zodiaci, quæ antecedunt partes 10. 5. scr. ♋.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     | ♈     | ♊     | ♋     | ♌     | ♍      |
|----|-------|-------|-------|-------|-------|--------|
|    | temp. | temp. | temp. | temp. | temp. | temp.  |
| 0  | 360   | 0     | a     | non   | sed   | per    |
| 1  | 353   | 17    |       |       |       |        |
| 2  | 346   | 27    |       |       |       |        |
| 3  | 339   | 19    |       |       |       |        |
| 4  | 331   | 38    |       |       |       |        |
| 5  | 323   | 5     |       |       |       |        |
| 6  | 312   | 47    |       |       |       |        |
| 7  | 299   | 8     |       |       |       |        |
| 8  |       |       |       |       |       |        |
| 9  | Hic   | ci    | o     | ex    | fu    | zo     |
| 10 |       |       |       |       |       |        |
| 11 |       |       |       |       |       |        |
| 12 |       |       |       |       |       |        |
| 13 |       |       |       |       |       |        |
| 14 |       |       |       |       |       |        |
| 15 | zo    |       |       |       |       |        |
| 16 |       |       |       |       |       |        |
| 17 |       | ar    | ri    | tat   | pra   | tem    |
| 18 |       |       |       |       |       |        |
| 19 |       |       |       |       |       |        |
| 20 |       |       |       |       |       |        |
| 21 |       |       |       |       |       |        |
| 22 |       |       |       |       |       |        |
| 23 |       |       |       |       |       | 106 17 |
| 24 |       |       |       |       |       | 121 46 |
| 25 |       |       |       |       |       | 133 54 |
| 26 | di    |       |       |       |       | 144 17 |
| 27 |       | cus   | tur   | sem   | Ho    | 153 48 |
| 28 |       |       |       |       |       | 162 47 |
| 29 |       |       |       |       |       | 171 27 |
| 30 |       |       |       |       |       | 180 0  |

Arcus zodiaci partium 82. 27. scr. utrinq; ab initio ♋. semper extat supra horizont.  
 Cum 22. part. 27. scr. ♋ ascendunt 83. tempora, 4. scr. æquinoctialis, ac inde immedie  
 diate ascendunt partes zodiaci, quæ sequuntur partes 22. 27. scr. ♍.



IN VAD LATITVDINEM 87 GRADVVM AT

|    | ♈     | ♉     | ♊     | ♋     | ♌     | ♍     |
|----|-------|-------|-------|-------|-------|-------|
|    | temp. | temp. | temp. | temp. | temp. | temp. |
| 0  | 180   | 0     | a     | non   | fed   | per   |
| 1  | 188   | 33    |       |       |       | zon   |
| 2  | 197   | 13    |       |       |       |       |
| 3  | 206   | 12    |       |       |       |       |
| 4  | 215   | 43    |       |       |       |       |
| 5  | 226   | 6     |       |       |       |       |
| 6  | 238   | 14    |       |       |       |       |
| 7  | 253   | 43    |       |       |       |       |
| 8  |       |       |       |       |       |       |
| 9  | Hic   | ci    | o     | la    | sub   |       |
| 10 |       |       |       |       |       |       |
| 11 |       |       |       |       |       |       |
| 12 |       |       |       |       |       |       |
| 13 |       |       |       |       |       |       |
| 14 |       |       |       |       |       | te    |
| 15 |       |       |       |       |       |       |
| 16 | zo    | ar    | ri    | tet   | ho    |       |
| 17 |       |       |       |       |       |       |
| 18 |       |       |       |       |       |       |
| 19 |       |       |       |       |       |       |
| 20 |       |       |       |       |       |       |
| 21 |       |       |       |       |       |       |
| 22 |       |       |       |       |       |       |
| 23 |       |       |       |       |       | 60 52 |
| 24 |       |       |       |       |       | 47 13 |
| 25 | di    | cus   | tur   | fem   | ri    | 36 55 |
| 26 |       |       |       |       |       | 28 22 |
| 27 |       |       |       |       |       | 20 41 |
| 28 |       |       |       |       |       | 13 33 |
| 29 |       |       |       |       |       | 6 43  |
| 30 |       |       |       |       |       | 0 0   |

Arcus zodiaci part. 82. 27. scr. utrinq; ab initio ♋ semper later sub horizonte.  
Cum 7. part. 33. scr. ♈ ascendunt 276. tempora 56. scr. æquinoctialis, ac inde im-  
mediate ascendunt partes zodiaci quæ anteccedunt partes 7. 33. scr. ♋.



# TABVLA ASCENSIONVM OBLIQVARVM

|    | V     | ♄     | II    | ♊     | ♋     | ♌      |
|----|-------|-------|-------|-------|-------|--------|
|    | temp. | temp. | temp. | temp. | temp. | temp.  |
| 0  | 360   | 0     | a     | non   | fed   | per    |
| 1  | 349   | 31    |       |       |       |        |
| 2  | 338   | 22    |       |       |       |        |
| 3  | 326   | 6     |       |       |       |        |
| 4  | 310   | 55    |       |       |       |        |
| 5  | 280   | 38    |       |       |       |        |
| 6  |       |       |       |       |       |        |
| 7  | Hic   |       |       |       |       |        |
| 8  |       |       |       |       |       |        |
| 9  |       |       | ci    | o     | ex    | fu     |
| 10 |       |       |       |       |       | zon    |
| 11 |       |       |       |       |       |        |
| 12 |       |       |       |       |       |        |
| 13 | zo    |       |       |       |       |        |
| 14 |       |       |       |       |       |        |
| 15 |       |       |       |       |       |        |
| 16 |       |       |       |       |       |        |
| 17 |       |       |       |       |       |        |
| 18 |       |       | ar    | ri    | tat   | pra    |
| 19 |       |       |       |       |       |        |
| 20 |       |       |       |       |       |        |
| 21 |       |       |       |       |       | tem    |
| 22 |       |       |       |       |       |        |
| 23 |       |       |       |       |       |        |
| 24 |       |       |       |       |       |        |
| 25 | di    |       |       |       |       | 91 28  |
| 26 |       |       |       |       |       | 123 34 |
| 27 |       |       | cus   | tur   | sem   | 140 36 |
| 28 |       |       |       |       |       | 154 42 |
| 29 |       |       |       |       |       | 167 41 |
| 30 |       |       |       |       |       | 180 0  |

Arcus zodiaci part. 84. 58. scrup. utrinque ab initio ♊ semper extat supra Horizontem.  
 Cum 24. part. 58. scrup. ♋ ascendunt 85. tempora 23. scr. æquinoct. ac inde immediate ascendunt partes zodiaci, quæ sequuntur partes, 24. 58. scr. ♌.



## AD LATITVDINEM 88. GRADVVM

|    | ☿     | ♈     | ♉     | ♊     | ♋     | ♌     |
|----|-------|-------|-------|-------|-------|-------|
|    | temp. | temp. | temp. | temp. | temp. | temp. |
| 0  | 180   | 0     | a     | non   | sed   | per   |
| 1  | 192   | 19    |       |       |       | ri    |
| 2  | 205   | 18    |       |       |       |       |
| 3  | 219   | 24    |       |       |       |       |
| 4  | 236   | 26    |       |       |       |       |
| 5  | 268   | 32    |       |       |       |       |
| 6  |       |       |       |       |       |       |
| 7  | Hic   |       |       |       |       |       |
| 8  |       |       | ci    | o     | la    | sub   |
| 9  |       |       |       |       |       | zon   |
| 10 |       |       |       |       |       |       |
| 11 |       |       |       |       |       |       |
| 12 |       |       |       |       |       |       |
| 13 |       |       |       |       |       |       |
| 14 |       |       |       |       |       |       |
| 15 | zo    |       |       |       |       |       |
| 16 |       |       |       |       |       |       |
| 17 |       | ar    | ri    | tet   | tus   |       |
| 18 |       |       |       |       |       |       |
| 19 |       |       |       |       |       | te    |
| 20 |       |       |       |       |       |       |
| 21 |       |       |       |       |       |       |
| 22 |       |       |       |       |       |       |
| 23 |       |       |       |       |       |       |
| 24 |       |       |       |       |       |       |
| 25 |       |       |       |       |       | 79 22 |
| 26 | di    | cus   | tur   | sem   | Ho    | 49 5  |
| 27 |       |       |       |       |       | 33 54 |
| 28 |       |       |       |       |       | 21 38 |
| 29 |       |       |       |       |       | 10 29 |
| 30 |       |       |       |       |       | 0 0   |

Arcus zodiaci part. 84. 58. scr. utrinque ab initio ♊ semper latet sub horizonte.  
 Cum 5. part. 2. scr. ☿ ascendunt 275. tempora 2. scr. æquinoctialis, ac inde im-  
 mediate ascendunt partes zodiaci quæ antecedunt partes 5. 2. scr. ♋.



# TABVLA ASCENSIONVM MOBLIQVAVM

|    | V     | ♄     | ♂     | ♂     | ♂     | ♂     | ♂     |
|----|-------|-------|-------|-------|-------|-------|-------|
|    | temp. | temp. | temp. | temp. | temp. | temp. | temp. |
| 0  | 360   | 0     | a     | non   | sed   | per   | ri    |
| 1  | 337   | 28    |       |       |       |       |       |
| 2  | 308   | 47    |       |       |       |       |       |
| 3  |       |       |       |       |       |       |       |
| 4  | Hic   |       |       |       |       |       |       |
| 5  |       |       |       |       |       |       |       |
| 6  |       |       |       |       |       |       |       |
| 7  |       |       | ci    | o     | ex    | fu    |       |
| 8  |       |       |       |       |       |       | zon   |
| 9  |       |       |       |       |       |       |       |
| 10 |       |       |       |       |       |       |       |
| 11 |       |       |       |       |       |       |       |
| 12 |       |       |       |       |       |       |       |
| 13 |       |       |       |       |       |       |       |
| 14 |       |       |       |       |       |       |       |
| 15 | zo    |       |       |       |       |       |       |
| 16 |       |       | ar    | ri    | rat   | pra   |       |
| 17 |       |       |       |       |       |       |       |
| 18 |       |       |       |       |       |       |       |
| 19 |       |       |       |       |       |       |       |
| 20 |       |       |       |       |       |       | tem   |
| 21 |       |       |       |       |       |       |       |
| 22 |       |       |       |       |       |       |       |
| 23 |       |       |       |       |       |       |       |
| 24 |       |       |       |       |       |       |       |
| 25 |       |       |       |       |       |       |       |
| 26 |       |       |       |       |       |       |       |
| 27 | di    | cus   | tur   | fem   | ho    |       |       |
| 28 |       |       |       |       |       | 122   | 7     |
| 29 |       |       |       |       |       | 155   | 38    |
| 30 |       |       |       |       |       | 180   | 0     |

Arcus zodiaci part. 87. 29. scrup. utrinq; ab initio ♄ semper extat supra Horizont.  
 Cum 27. part. 29. scrup. ♄ ascendunt 87. tempora 41. scr. æquinoct. ac inde immedi-  
 ate ascendunt partes zodiaci, quæ sequuntur partes zodiaci, 27. 29. scr. ♄.



## AD LATITVDINEM 89. GRADVS.

|    | ♈     | ♉  | ♊     | ♋   | ♌     | ♍     |
|----|-------|----|-------|-----|-------|-------|
|    | temp. | /  | temp. | /   | temp. | /     |
| 0  | 180   | 0  |       |     |       |       |
| 1  | 204   | 22 | a     | non | fed   | per   |
| 2  | 237   | 53 |       |     |       | ri    |
| 3  | Hic   |    |       |     |       |       |
| 4  |       |    |       |     |       |       |
| 5  |       |    |       |     |       |       |
| 6  |       |    |       |     |       |       |
| 7  |       |    |       |     |       |       |
| 8  |       |    | ci    | o   | la    | sub   |
| 9  |       |    |       |     |       | zon   |
| 10 |       |    |       |     |       |       |
| 11 |       |    |       |     |       |       |
| 12 |       |    |       |     |       |       |
| 13 | zo    |    |       |     |       |       |
| 14 |       |    |       |     |       |       |
| 15 |       |    |       |     |       |       |
| 16 |       |    |       |     |       |       |
| 17 |       |    | ar    | ri  | tet   | tus   |
| 18 |       |    |       |     |       |       |
| 19 |       |    |       |     |       | te    |
| 20 |       |    |       |     |       |       |
| 21 |       |    |       |     |       |       |
| 22 |       |    |       |     |       |       |
| 23 |       |    |       |     |       |       |
| 24 |       |    |       |     |       |       |
| 25 | di    |    |       |     |       |       |
| 26 |       |    |       |     |       |       |
| 27 |       |    | cus   | tur | fem   | ho    |
| 28 |       |    |       |     |       | 51 13 |
| 29 |       |    |       |     |       | 22 32 |
| 30 |       |    |       |     |       | 0 0   |

Arcus zodiaci partium 87 . 29 . scr. utrinq; ab initio ♋. semper latet sub horizonte.  
 Cum 2. part. 31. scr. ♈ ascendunt 272. tempora, 19. scr. æquinoctialis, ac inde immes-  
 diate ascendunt partes zodiaci, quæ antecedunt partes 2. 31. scr. ♋.







# SEQVNTVR

CANONES OBLIQUARVM ASCEN-

sionum ad latitudines regionum 16. 24. 31. 36. 41. 45. 48.

51. 54. 57. 60. 63. 66. gradus, pro maxima ☉ obliquitate

gradus, 23. 52'. quanta fuit tempore

Christi & Ptole-

mæifere.



# TABVLA ASCENSIONVM OBLIQVARVM

| ♄  | V     |    | ♅     |    | ♆     |    | ♇     |    | ♈     |    | ♉     |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. |    | temp. |    | temp. |    | temp. |    | temp. |    | temp. |    |
| 0  | 0     | 0  | 24    | 26 | 51    | 34 | 82    | 43 | 116   | 6  | 148   | 46 |
| 1  | 0     | 48 | 25    | 17 | 52    | 33 | 83    | 48 | 117   | 13 | 149   | 50 |
| 2  | 1     | 36 | 26    | 8  | 53    | 32 | 84    | 54 | 118   | 20 | 150   | 53 |
| 3  | 2     | 24 | 26    | 59 | 54    | 31 | 86    | 0  | 119   | 27 | 151   | 57 |
| 4  | 3     | 12 | 27    | 51 | 55    | 30 | 87    | 6  | 120   | 33 | 153   | 0  |
| 5  | 4     | 0  | 28    | 43 | 56    | 30 | 88    | 13 | 121   | 40 | 154   | 3  |
| 6  | 4     | 48 | 29    | 34 | 57    | 29 | 89    | 19 | 122   | 46 | 155   | 6  |
| 7  | 5     | 36 | 30    | 27 | 58    | 30 | 90    | 25 | 123   | 52 | 156   | 9  |
| 8  | 6     | 24 | 31    | 19 | 59    | 30 | 91    | 32 | 124   | 58 | 157   | 12 |
| 9  | 7     | 12 | 32    | 11 | 60    | 31 | 92    | 39 | 126   | 4  | 158   | 15 |
| 10 | 8     | 0  | 33    | 4  | 61    | 32 | 93    | 45 | 127   | 10 | 159   | 18 |
| 11 | 8     | 48 | 33    | 57 | 62    | 33 | 94    | 51 | 128   | 16 | 160   | 20 |
| 12 | 9     | 37 | 34    | 51 | 63    | 35 | 95    | 59 | 129   | 21 | 161   | 23 |
| 13 | 10    | 25 | 35    | 44 | 64    | 36 | 97    | 6  | 130   | 28 | 162   | 25 |
| 14 | 11    | 14 | 36    | 38 | 65    | 38 | 98    | 13 | 131   | 33 | 163   | 28 |
| 15 | 12    | 2  | 37    | 32 | 66    | 41 | 99    | 20 | 132   | 39 | 164   | 30 |
| 16 | 12    | 51 | 38    | 26 | 67    | 43 | 100   | 27 | 133   | 44 | 165   | 32 |
| 17 | 13    | 40 | 39    | 21 | 68    | 46 | 101   | 35 | 134   | 49 | 166   | 35 |
| 18 | 14    | 29 | 40    | 15 | 69    | 49 | 102   | 42 | 135   | 54 | 167   | 37 |
| 19 | 15    | 18 | 41    | 11 | 70    | 52 | 103   | 49 | 136   | 59 | 168   | 39 |
| 20 | 16    | 7  | 42    | 6  | 71    | 56 | 104   | 56 | 138   | 4  | 169   | 41 |
| 21 | 16    | 56 | 43    | 1  | 72    | 59 | 106   | 3  | 139   | 9  | 170   | 43 |
| 22 | 17    | 45 | 43    | 57 | 74    | 3  | 107   | 10 | 140   | 14 | 171   | 45 |
| 23 | 18    | 35 | 44    | 53 | 75    | 8  | 108   | 17 | 141   | 18 | 172   | 47 |
| 24 | 19    | 25 | 45    | 50 | 76    | 12 | 109   | 25 | 142   | 22 | 173   | 49 |
| 25 | 20    | 14 | 46    | 47 | 77    | 17 | 110   | 33 | 143   | 27 | 174   | 51 |
| 26 | 21    | 5  | 47    | 44 | 78    | 22 | 111   | 39 | 144   | 31 | 175   | 53 |
| 27 | 21    | 55 | 48    | 41 | 79    | 27 | 112   | 46 | 145   | 35 | 176   | 55 |
| 28 | 22    | 45 | 49    | 39 | 80    | 32 | 113   | 53 | 146   | 39 | 177   | 56 |
| 29 | 23    | 36 | 50    | 36 | 81    | 37 | 115   | 0  | 147   | 43 | 178   | 58 |
| 30 | 24    | 26 | 51    | 34 | 82    | 43 | 116   | 6  | 148   | 46 | 180   | 0  |



## AD LATITVDINEM 16. GRADVVM

175

| ̄  | ☊     |    | m   |       | ⋈   |    | ♋     |    | ♊   |       | ♏   |    | ♍     |
|----|-------|----|-----|-------|-----|----|-------|----|-----|-------|-----|----|-------|
|    | temp. | /  |     | temp. | /   |    | temp. | /  |     | temp. | /   |    | temp. |
| 0  | 180   | 0  | 211 | 14    | 243 | 54 | 277   | 17 | 308 | 26    | 335 | 34 |       |
| 1  | 181   | 2  | 212 | 17    | 245 | 0  | 278   | 23 | 309 | 24    | 336 | 24 |       |
| 2  | 182   | 4  | 213 | 21    | 246 | 7  | 279   | 28 | 310 | 21    | 337 | 15 |       |
| 3  | 183   | 5  | 214 | 25    | 247 | 14 | 280   | 33 | 311 | 19    | 338 | 5  |       |
| 4  | 184   | 7  | 215 | 29    | 248 | 21 | 281   | 38 | 312 | 16    | 338 | 55 |       |
| 5  | 185   | 9  | 216 | 33    | 249 | 27 | 282   | 43 | 313 | 13    | 339 | 46 |       |
| 6  | 186   | 11 | 217 | 38    | 250 | 35 | 283   | 48 | 314 | 10    | 340 | 35 |       |
| 7  | 187   | 13 | 218 | 42    | 251 | 43 | 284   | 52 | 315 | 7     | 341 | 25 |       |
| 8  | 188   | 15 | 219 | 46    | 252 | 50 | 285   | 57 | 316 | 3     | 342 | 15 |       |
| 9  | 189   | 17 | 220 | 51    | 253 | 57 | 287   | 1  | 316 | 59    | 343 | 4  |       |
| 10 | 190   | 19 | 221 | 55    | 255 | 4  | 288   | 4  | 317 | 54    | 343 | 53 |       |
| 11 | 191   | 21 | 223 | 1     | 256 | 11 | 289   | 8  | 318 | 49    | 344 | 42 |       |
| 12 | 192   | 23 | 224 | 6     | 257 | 18 | 290   | 11 | 319 | 45    | 345 | 31 |       |
| 13 | 193   | 25 | 225 | 11    | 258 | 25 | 291   | 14 | 320 | 39    | 346 | 20 |       |
| 14 | 194   | 28 | 226 | 16    | 259 | 33 | 292   | 17 | 321 | 34    | 347 | 9  |       |
| 15 | 195   | 30 | 227 | 21    | 260 | 40 | 293   | 19 | 322 | 28    | 347 | 58 |       |
| 16 | 196   | 32 | 228 | 27    | 261 | 47 | 294   | 22 | 323 | 22    | 348 | 46 |       |
| 17 | 197   | 35 | 229 | 32    | 262 | 54 | 295   | 24 | 324 | 16    | 349 | 35 |       |
| 18 | 198   | 37 | 230 | 38    | 264 | 1  | 296   | 25 | 325 | 9     | 350 | 23 |       |
| 19 | 199   | 40 | 231 | 44    | 265 | 8  | 297   | 27 | 326 | 3     | 351 | 12 |       |
| 20 | 200   | 42 | 232 | 50    | 266 | 15 | 298   | 28 | 326 | 56    | 352 | 0  |       |
| 21 | 201   | 45 | 233 | 56    | 267 | 21 | 299   | 29 | 327 | 49    | 352 | 48 |       |
| 22 | 202   | 48 | 235 | 2     | 268 | 28 | 300   | 30 | 328 | 41    | 353 | 36 |       |
| 23 | 203   | 51 | 236 | 8     | 269 | 35 | 301   | 30 | 329 | 33    | 354 | 24 |       |
| 24 | 204   | 54 | 237 | 14    | 270 | 41 | 302   | 31 | 330 | 26    | 355 | 12 |       |
| 25 | 205   | 57 | 238 | 20    | 271 | 47 | 303   | 30 | 331 | 17    | 356 | 0  |       |
| 26 | 207   | 0  | 239 | 27    | 272 | 54 | 304   | 30 | 332 | 9     | 356 | 48 |       |
| 27 | 208   | 3  | 240 | 33    | 274 | 0  | 305   | 29 | 333 | 1     | 357 | 36 |       |
| 28 | 209   | 7  | 241 | 40    | 275 | 6  | 306   | 28 | 333 | 52    | 358 | 24 |       |
| 29 | 210   | 10 | 242 | 47    | 276 | 12 | 307   | 27 | 334 | 43    | 359 | 12 |       |
| 30 | 211   | 14 | 243 | 54    | 277 | 17 | 308   | 26 | 335 | 34    | 360 | 0  |       |



# TABVLA ASCENSIONVM OBLIQVARVM

| ♄  | V     |    | ♅     |    | ♆     |    | ♇     |    | ♈     |    | ♉     |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |
| 0  | 0     | 0  | 22    | 33 | 48    | 9  | 78    | 38 | 112   | 41 | 146   | 53 |
| 1  | 0     | 44 | 23    | 21 | 49    | 5  | 79    | 44 | 113   | 50 | 148   | 1  |
| 2  | 1     | 28 | 24    | 8  | 50    | 1  | 80    | 50 | 114   | 59 | 149   | 8  |
| 3  | 2     | 12 | 24    | 56 | 50    | 58 | 81    | 56 | 115   | 8  | 150   | 15 |
| 4  | 2     | 56 | 25    | 44 | 51    | 55 | 83    | 3  | 117   | 18 | 151   | 22 |
| 5  | 3     | 40 | 26    | 32 | 52    | 53 | 84    | 10 | 118   | 27 | 152   | 29 |
| 6  | 4     | 25 | 27    | 20 | 53    | 50 | 85    | 16 | 119   | 36 | 153   | 35 |
| 7  | 5     | 9  | 28    | 9  | 54    | 48 | 86    | 23 | 120   | 45 | 154   | 42 |
| 8  | 5     | 53 | 28    | 58 | 55    | 47 | 87    | 31 | 121   | 54 | 155   | 48 |
| 9  | 6     | 37 | 29    | 47 | 56    | 46 | 88    | 38 | 123   | 3  | 156   | 55 |
| 10 | 7     | 22 | 30    | 37 | 57    | 45 | 89    | 46 | 124   | 12 | 158   | 1  |
| 11 | 8     | 6  | 31    | 27 | 58    | 45 | 90    | 53 | 125   | 20 | 159   | 8  |
| 12 | 8     | 51 | 32    | 17 | 59    | 45 | 92    | 1  | 126   | 29 | 160   | 14 |
| 13 | 9     | 35 | 33    | 7  | 60    | 45 | 93    | 9  | 127   | 38 | 161   | 20 |
| 14 | 10    | 20 | 33    | 57 | 61    | 45 | 94    | 18 | 128   | 47 | 162   | 26 |
| 15 | 11    | 5  | 34    | 48 | 62    | 46 | 95    | 26 | 129   | 55 | 163   | 32 |
| 16 | 11    | 50 | 35    | 39 | 63    | 48 | 96    | 35 | 131   | 4  | 164   | 39 |
| 17 | 12    | 35 | 36    | 31 | 64    | 49 | 97    | 43 | 132   | 12 | 165   | 45 |
| 18 | 13    | 20 | 37    | 22 | 65    | 51 | 98    | 52 | 133   | 20 | 166   | 51 |
| 19 | 14    | 5  | 38    | 14 | 66    | 53 | 100   | 0  | 134   | 29 | 167   | 57 |
| 20 | 14    | 51 | 39    | 7  | 67    | 56 | 101   | 9  | 135   | 37 | 169   | 3  |
| 21 | 15    | 36 | 40    | 0  | 68    | 59 | 102   | 18 | 136   | 45 | 170   | 8  |
| 22 | 16    | 22 | 40    | 53 | 70    | 2  | 103   | 27 | 137   | 53 | 171   | 14 |
| 23 | 17    | 8  | 41    | 46 | 71    | 6  | 104   | 36 | 139   | 1  | 172   | 20 |
| 24 | 17    | 54 | 42    | 40 | 72    | 9  | 105   | 45 | 140   | 8  | 173   | 26 |
| 25 | 18    | 41 | 43    | 34 | 73    | 14 | 106   | 55 | 141   | 16 | 174   | 32 |
| 26 | 19    | 26 | 44    | 28 | 74    | 18 | 108   | 4  | 142   | 24 | 175   | 37 |
| 27 | 20    | 13 | 45    | 23 | 75    | 23 | 109   | 13 | 143   | 31 | 176   | 43 |
| 28 | 20    | 59 | 46    | 18 | 76    | 27 | 110   | 22 | 144   | 38 | 177   | 49 |
| 29 | 21    | 46 | 47    | 13 | 77    | 33 | 111   | 31 | 145   | 46 | 178   | 54 |
| 30 | 22    | 33 | 48    | 9  | 78    | 38 | 112   | 41 | 146   | 53 | 180   | 0  |



# AD LATITVDINEM 24. GRADVV M. 176

| ̄  | ⱥ     |    | ⱦ     |    | Ⱨ     |    | ⱨ     |    | Ⱪ     |    | ⱪ     |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |
| 0  | 180   | 0  | 213   | 7  | 247   | 19 | 281   | 22 | 311   | 51 | 337   | 27 |
| 1  | 181   | 6  | 214   | 14 | 248   | 29 | 282   | 27 | 312   | 47 | 338   | 14 |
| 2  | 182   | 11 | 215   | 22 | 249   | 38 | 283   | 32 | 313   | 42 | 339   | 1  |
| 3  | 183   | 17 | 216   | 29 | 250   | 47 | 284   | 37 | 314   | 37 | 339   | 47 |
| 4  | 184   | 23 | 217   | 36 | 251   | 56 | 285   | 42 | 315   | 32 | 340   | 34 |
| 5  | 185   | 28 | 218   | 44 | 253   | 5  | 286   | 46 | 316   | 26 | 341   | 19 |
| 6  | 186   | 34 | 219   | 52 | 254   | 15 | 287   | 51 | 317   | 20 | 342   | 6  |
| 7  | 187   | 40 | 220   | 59 | 255   | 24 | 288   | 54 | 318   | 14 | 342   | 52 |
| 8  | 188   | 46 | 222   | 7  | 256   | 33 | 289   | 58 | 319   | 7  | 343   | 38 |
| 9  | 189   | 52 | 223   | 15 | 257   | 42 | 291   | 1  | 320   | 0  | 344   | 24 |
| 10 | 190   | 57 | 224   | 23 | 258   | 51 | 292   | 4  | 320   | 53 | 345   | 9  |
| 11 | 192   | 3  | 225   | 31 | 260   | 0  | 293   | 7  | 321   | 46 | 345   | 55 |
| 12 | 193   | 9  | 226   | 40 | 261   | 8  | 294   | 9  | 322   | 38 | 346   | 40 |
| 13 | 194   | 15 | 227   | 48 | 262   | 17 | 285   | 11 | 323   | 21 | 347   | 25 |
| 14 | 195   | 21 | 228   | 56 | 263   | 25 | 296   | 12 | 324   | 29 | 348   | 10 |
| 15 | 196   | 28 | 230   | 5  | 264   | 34 | 297   | 13 | 325   | 12 | 348   | 55 |
| 16 | 197   | 34 | 231   | 13 | 265   | 42 | 298   | 15 | 326   | 3  | 349   | 40 |
| 17 | 198   | 40 | 232   | 22 | 266   | 51 | 299   | 15 | 326   | 53 | 350   | 25 |
| 18 | 199   | 46 | 233   | 31 | 267   | 59 | 300   | 15 | 327   | 43 | 351   | 9  |
| 19 | 200   | 52 | 234   | 40 | 269   | 7  | 301   | 15 | 328   | 33 | 351   | 54 |
| 20 | 201   | 59 | 235   | 48 | 270   | 14 | 302   | 15 | 329   | 23 | 352   | 38 |
| 21 | 203   | 5  | 236   | 57 | 271   | 22 | 303   | 14 | 330   | 13 | 353   | 23 |
| 22 | 204   | 12 | 238   | 6  | 272   | 29 | 304   | 13 | 331   | 2  | 354   | 7  |
| 23 | 205   | 18 | 239   | 15 | 273   | 37 | 305   | 12 | 331   | 51 | 354   | 51 |
| 24 | 206   | 25 | 240   | 24 | 274   | 44 | 306   | 10 | 332   | 28 | 355   | 35 |
| 25 | 207   | 31 | 241   | 33 | 275   | 50 | 307   | 7  | 333   | 28 | 356   | 20 |
| 26 | 208   | 38 | 242   | 42 | 276   | 57 | 308   | 5  | 334   | 16 | 357   | 4  |
| 27 | 209   | 45 | 243   | 52 | 278   | 4  | 309   | 2  | 335   | 4  | 357   | 48 |
| 28 | 210   | 52 | 245   | 1  | 279   | 10 | 309   | 59 | 335   | 52 | 358   | 32 |
| 29 | 211   | 59 | 246   | 10 | 280   | 16 | 310   | 55 | 336   | 39 | 359   | 16 |
| 30 | 213   | 7  | 247   | 19 | 281   | 22 | 311   | 51 | 337   | 27 | 360   | 0  |



# TABVLA ASCENSIONVM OBLIQVARVM

| ♄  | V     |    | ♂     |    | ♂     |    | ♂     |    | ♂     |    | ♂     |    | ♂     |  | ♂     |  |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|--|-------|--|
|    | temp. |    | temp. |    | temp. |    | temp. |    | temp. |    | temp. |    | temp. |  | temp. |  |
| 0  | 0     | 0  | 20    | 42 | 44    | 45 | 74    | 35 | 109   | 16 | 145   | 2  |       |  |       |  |
| 1  | 0     | 40 | 21    | 26 | 45    | 38 | 75    | 41 | 110   | 28 | 146   | 13 |       |  |       |  |
| 2  | 1     | 21 | 22    | 10 | 46    | 32 | 76    | 47 | 111   | 40 | 147   | 24 |       |  |       |  |
| 3  | 2     | 1  | 22    | 54 | 47    | 27 | 77    | 53 | 112   | 52 | 148   | 35 |       |  |       |  |
| 4  | 2     | 41 | 23    | 39 | 48    | 22 | 79    | 0  | 114   | 3  | 149   | 45 |       |  |       |  |
| 5  | 3     | 22 | 24    | 23 | 49    | 17 | 80    | 7  | 115   | 15 | 150   | 55 |       |  |       |  |
| 6  | 4     | 2  | 25    | 8  | 50    | 13 | 81    | 14 | 116   | 27 | 152   | 6  |       |  |       |  |
| 7  | 4     | 42 | 25    | 54 | 51    | 9  | 82    | 22 | 117   | 39 | 153   | 16 |       |  |       |  |
| 8  | 5     | 23 | 26    | 39 | 52    | 6  | 83    | 30 | 118   | 51 | 154   | 26 |       |  |       |  |
| 9  | 6     | 3  | 27    | 25 | 53    | 3  | 84    | 38 | 120   | 3  | 155   | 36 |       |  |       |  |
| 10 | 6     | 44 | 28    | 11 | 54    | 0  | 85    | 47 | 121   | 15 | 156   | 46 |       |  |       |  |
| 11 | 7     | 25 | 28    | 58 | 54    | 58 | 86    | 56 | 122   | 26 | 157   | 56 |       |  |       |  |
| 12 | 8     | 6  | 29    | 44 | 55    | 56 | 88    | 5  | 123   | 38 | 159   | 6  |       |  |       |  |
| 13 | 8     | 46 | 30    | 31 | 56    | 55 | 89    | 14 | 124   | 50 | 160   | 16 |       |  |       |  |
| 14 | 9     | 27 | 31    | 19 | 57    | 54 | 90    | 23 | 126   | 2  | 161   | 26 |       |  |       |  |
| 15 | 10    | 9  | 32    | 6  | 58    | 53 | 91    | 33 | 127   | 13 | 162   | 36 |       |  |       |  |
| 16 | 10    | 50 | 32    | 54 | 59    | 53 | 92    | 43 | 128   | 25 | 163   | 46 |       |  |       |  |
| 17 | 11    | 31 | 33    | 43 | 60    | 54 | 93    | 53 | 129   | 37 | 164   | 56 |       |  |       |  |
| 18 | 12    | 12 | 34    | 31 | 61    | 55 | 95    | 3  | 130   | 48 | 166   | 6  |       |  |       |  |
| 19 | 12    | 54 | 35    | 21 | 62    | 56 | 96    | 13 | 132   | 0  | 167   | 15 |       |  |       |  |
| 20 | 13    | 36 | 36    | 10 | 63    | 57 | 97    | 24 | 133   | 11 | 168   | 25 |       |  |       |  |
| 21 | 14    | 17 | 37    | 0  | 64    | 59 | 98    | 35 | 134   | 22 | 169   | 34 |       |  |       |  |
| 22 | 14    | 59 | 37    | 50 | 66    | 2  | 99    | 46 | 135   | 33 | 170   | 44 |       |  |       |  |
| 23 | 15    | 42 | 38    | 40 | 67    | 4  | 100   | 57 | 136   | 45 | 171   | 54 |       |  |       |  |
| 24 | 16    | 24 | 39    | 31 | 68    | 8  | 102   | 8  | 137   | 56 | 173   | 3  |       |  |       |  |
| 25 | 17    | 7  | 40    | 22 | 69    | 11 | 103   | 19 | 139   | 7  | 174   | 13 |       |  |       |  |
| 26 | 17    | 49 | 41    | 14 | 70    | 15 | 104   | 30 | 140   | 19 | 175   | 22 |       |  |       |  |
| 27 | 18    | 32 | 42    | 6  | 71    | 20 | 105   | 42 | 141   | 30 | 176   | 32 |       |  |       |  |
| 28 | 19    | 15 | 42    | 59 | 72    | 24 | 106   | 53 | 142   | 40 | 177   | 41 |       |  |       |  |
| 29 | 19    | 59 | 43    | 51 | 73    | 29 | 108   | 5  | 143   | 51 | 178   | 51 |       |  |       |  |
| 30 | 20    | 42 | 44    | 45 | 74    | 35 | 109   | 16 | 145   | 2  | 180   | 0  |       |  |       |  |



# AD LATITVDINEM 31. GRADVVM. 177

| 6  | ⌒     |    | Ⓜ     |    | ⚡     |    | ♋     |    | ♊     |    | ♏     |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |
| 0  | 180   | 0  | 214   | 58 | 250   | 44 | 285   | 25 | 315   | 15 | 339   | 18 |
| 1  | 181   | 9  | 216   | 9  | 251   | 55 | 286   | 31 | 316   | 9  | 340   | 2  |
| 2  | 182   | 19 | 217   | 20 | 253   | 7  | 287   | 36 | 317   | 1  | 340   | 45 |
| 3  | 183   | 28 | 218   | 30 | 254   | 18 | 288   | 40 | 317   | 54 | 341   | 28 |
| 4  | 184   | 38 | 219   | 41 | 255   | 30 | 289   | 45 | 318   | 46 | 342   | 11 |
| 5  | 185   | 47 | 220   | 53 | 256   | 41 | 290   | 49 | 319   | 38 | 342   | 53 |
| 6  | 186   | 57 | 222   | 4  | 257   | 52 | 291   | 52 | 320   | 29 | 343   | 36 |
| 7  | 188   | 6  | 223   | 15 | 259   | 3  | 292   | 56 | 321   | 20 | 344   | 18 |
| 8  | 189   | 16 | 224   | 27 | 260   | 14 | 293   | 58 | 322   | 10 | 345   | 1  |
| 9  | 190   | 26 | 225   | 38 | 261   | 25 | 295   | 1  | 323   | 0  | 345   | 43 |
| 10 | 191   | 35 | 226   | 49 | 262   | 36 | 296   | 3  | 323   | 50 | 346   | 24 |
| 11 | 192   | 45 | 228   | 0  | 263   | 47 | 297   | 4  | 324   | 39 | 347   | 6  |
| 12 | 193   | 54 | 229   | 12 | 264   | 57 | 298   | 5  | 325   | 29 | 347   | 48 |
| 13 | 195   | 4  | 230   | 23 | 266   | 7  | 299   | 6  | 326   | 17 | 348   | 29 |
| 14 | 196   | 14 | 231   | 35 | 267   | 17 | 300   | 7  | 327   | 6  | 349   | 10 |
| 15 | 197   | 24 | 232   | 47 | 268   | 27 | 301   | 7  | 327   | 54 | 349   | 51 |
| 16 | 198   | 34 | 233   | 58 | 269   | 37 | 302   | 6  | 328   | 41 | 350   | 33 |
| 17 | 199   | 44 | 235   | 10 | 270   | 46 | 303   | 5  | 329   | 29 | 351   | 14 |
| 18 | 200   | 54 | 236   | 22 | 271   | 55 | 304   | 4  | 330   | 16 | 351   | 54 |
| 19 | 202   | 4  | 237   | 34 | 273   | 4  | 305   | 2  | 331   | 2  | 352   | 35 |
| 20 | 203   | 14 | 238   | 45 | 274   | 13 | 306   | 0  | 331   | 49 | 353   | 16 |
| 21 | 204   | 24 | 239   | 57 | 275   | 22 | 306   | 57 | 332   | 35 | 353   | 57 |
| 22 | 205   | 34 | 241   | 9  | 276   | 30 | 307   | 54 | 333   | 21 | 354   | 37 |
| 23 | 206   | 44 | 242   | 21 | 277   | 38 | 308   | 51 | 334   | 6  | 355   | 18 |
| 24 | 207   | 54 | 243   | 33 | 278   | 46 | 309   | 47 | 334   | 42 | 355   | 58 |
| 25 | 209   | 5  | 244   | 45 | 279   | 53 | 310   | 43 | 335   | 37 | 356   | 38 |
| 26 | 210   | 15 | 245   | 57 | 281   | 0  | 311   | 38 | 336   | 21 | 357   | 19 |
| 27 | 211   | 25 | 247   | 8  | 282   | 7  | 312   | 33 | 337   | 6  | 357   | 59 |
| 28 | 212   | 36 | 248   | 20 | 283   | 13 | 313   | 28 | 337   | 50 | 358   | 39 |
| 29 | 213   | 47 | 249   | 32 | 284   | 19 | 314   | 22 | 338   | 34 | 359   | 20 |
| 30 | 214   | 58 | 250   | 44 | 285   | 25 | 315   | 15 | 339   | 18 | 360   | 0  |



# TABVLA ASCENSIONVM OBLIQVARVM

| ̄  | V     |    | ̄     |    | II    |    | ̄     |    | ̄     |    | ̄     |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |
| 0  | 0     | 0  | 19    | 12 | 41    | 58 | 71    | 15 | 106   | 30 | 143   | 32 |
| 1  | 0     | 37 | 19    | 53 | 42    | 49 | 72    | 21 | 107   | 43 | 144   | 46 |
| 2  | 1     | 14 | 20    | 34 | 43    | 41 | 73    | 27 | 108   | 57 | 145   | 59 |
| 3  | 1     | 52 | 21    | 15 | 44    | 34 | 74    | 34 | 110   | 11 | 147   | 13 |
| 4  | 2     | 29 | 21    | 58 | 45    | 27 | 75    | 41 | 111   | 25 | 148   | 26 |
| 5  | 3     | 6  | 22    | 39 | 46    | 20 | 76    | 48 | 112   | 29 | 149   | 40 |
| 6  | 3     | 44 | 23    | 21 | 47    | 14 | 77    | 56 | 113   | 53 | 150   | 53 |
| 7  | 4     | 21 | 24    | 4  | 48    | 9  | 79    | 4  | 115   | 7  | 152   | 6  |
| 8  | 4     | 59 | 24    | 46 | 49    | 4  | 80    | 13 | 116   | 22 | 153   | 20 |
| 9  | 5     | 36 | 25    | 30 | 49    | 59 | 81    | 21 | 117   | 36 | 154   | 33 |
| 10 | 6     | 13 | 26    | 13 | 50    | 55 | 82    | 30 | 118   | 50 | 155   | 46 |
| 11 | 6     | 51 | 26    | 57 | 51    | 52 | 83    | 40 | 120   | 4  | 156   | 59 |
| 12 | 7     | 29 | 27    | 41 | 52    | 49 | 84    | 50 | 121   | 19 | 158   | 12 |
| 13 | 8     | 7  | 28    | 25 | 53    | 46 | 86    | 0  | 122   | 33 | 159   | 25 |
| 14 | 8     | 45 | 29    | 10 | 54    | 44 | 87    | 11 | 123   | 47 | 160   | 38 |
| 15 | 9     | 23 | 29    | 55 | 55    | 42 | 88    | 22 | 125   | 2  | 161   | 51 |
| 16 | 10    | 1  | 30    | 40 | 56    | 41 | 89    | 33 | 126   | 16 | 163   | 3  |
| 17 | 10    | 39 | 31    | 26 | 57    | 40 | 90    | 44 | 127   | 30 | 164   | 16 |
| 18 | 11    | 18 | 32    | 12 | 58    | 40 | 91    | 56 | 128   | 45 | 165   | 29 |
| 19 | 11    | 56 | 32    | 59 | 59    | 40 | 93    | 7  | 129   | 59 | 166   | 42 |
| 20 | 12    | 35 | 33    | 45 | 60    | 41 | 94    | 19 | 131   | 13 | 167   | 54 |
| 21 | 13    | 14 | 34    | 33 | 61    | 42 | 95    | 32 | 132   | 27 | 169   | 7  |
| 22 | 13    | 53 | 35    | 21 | 62    | 44 | 96    | 45 | 133   | 41 | 170   | 20 |
| 23 | 14    | 32 | 36    | 9  | 63    | 46 | 97    | 57 | 134   | 55 | 171   | 32 |
| 24 | 15    | 12 | 36    | 57 | 64    | 49 | 99    | 10 | 136   | 9  | 172   | 45 |
| 25 | 15    | 51 | 37    | 46 | 65    | 52 | 100   | 23 | 137   | 23 | 173   | 57 |
| 26 | 16    | 31 | 38    | 36 | 66    | 56 | 101   | 36 | 138   | 37 | 175   | 10 |
| 27 | 17    | 11 | 39    | 26 | 68    | 0  | 102   | 49 | 139   | 51 | 176   | 22 |
| 28 | 17    | 51 | 40    | 16 | 69    | 5  | 104   | 2  | 141   | 4  | 177   | 35 |
| 29 | 18    | 31 | 41    | 6  | 70    | 10 | 105   | 16 | 142   | 18 | 178   | 47 |
| 30 | 19    | 12 | 41    | 58 | 71    | 15 | 106   | 30 | 143   | 32 | 180   | 0  |



## AD LATITVDINEM 36. GRADVVM

| g  | p     |    | m     |    | T     |    | b     |    | w     |    | X     |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |
| 0  | 180   | 0  | 216   | 28 | 253   | 30 | 288   | 45 | 318   | 2  | 340   | 48 |
| 1  | 181   | 13 | 217   | 42 | 254   | 44 | 289   | 50 | 318   | 54 | 341   | 29 |
| 2  | 182   | 25 | 218   | 56 | 255   | 58 | 290   | 55 | 319   | 44 | 342   | 9  |
| 3  | 183   | 38 | 220   | 9  | 257   | 11 | 292   | 0  | 320   | 34 | 342   | 49 |
| 4  | 184   | 50 | 221   | 23 | 258   | 24 | 293   | 4  | 321   | 24 | 343   | 29 |
| 5  | 186   | 3  | 222   | 37 | 259   | 37 | 294   | 8  | 322   | 14 | 344   | 9  |
| 6  | 187   | 15 | 223   | 51 | 260   | 50 | 295   | 11 | 323   | 3  | 344   | 48 |
| 7  | 188   | 28 | 225   | 5  | 262   | 3  | 296   | 14 | 323   | 51 | 345   | 28 |
| 8  | 189   | 40 | 226   | 19 | 263   | 15 | 297   | 16 | 324   | 39 | 346   | 7  |
| 9  | 190   | 53 | 227   | 33 | 264   | 28 | 298   | 18 | 325   | 27 | 346   | 46 |
| 10 | 192   | 6  | 228   | 47 | 265   | 41 | 299   | 19 | 326   | 15 | 347   | 25 |
| 11 | 193   | 18 | 230   | 1  | 266   | 53 | 300   | 20 | 327   | 1  | 348   | 4  |
| 12 | 194   | 31 | 231   | 15 | 268   | 4  | 301   | 20 | 327   | 48 | 348   | 42 |
| 13 | 195   | 44 | 232   | 30 | 269   | 16 | 302   | 20 | 328   | 34 | 349   | 21 |
| 14 | 196   | 57 | 233   | 44 | 270   | 27 | 303   | 19 | 329   | 20 | 349   | 59 |
| 15 | 198   | 9  | 234   | 58 | 271   | 38 | 304   | 18 | 330   | 5  | 350   | 37 |
| 16 | 199   | 22 | 236   | 13 | 272   | 49 | 305   | 16 | 330   | 50 | 351   | 15 |
| 17 | 200   | 35 | 237   | 27 | 274   | 0  | 306   | 14 | 331   | 35 | 351   | 53 |
| 18 | 201   | 48 | 238   | 41 | 275   | 10 | 307   | 11 | 332   | 19 | 352   | 31 |
| 19 | 203   | 1  | 239   | 56 | 276   | 20 | 308   | 8  | 333   | 3  | 353   | 9  |
| 20 | 204   | 14 | 241   | 10 | 277   | 30 | 309   | 5  | 333   | 47 | 353   | 47 |
| 21 | 205   | 27 | 242   | 24 | 278   | 39 | 310   | 1  | 334   | 30 | 354   | 24 |
| 22 | 206   | 40 | 243   | 38 | 279   | 47 | 310   | 56 | 335   | 14 | 355   | 1  |
| 23 | 207   | 54 | 244   | 53 | 280   | 56 | 311   | 51 | 335   | 56 | 355   | 39 |
| 24 | 209   | 7  | 246   | 7  | 282   | 4  | 312   | 46 | 336   | 39 | 356   | 16 |
| 25 | 210   | 20 | 247   | 21 | 283   | 12 | 313   | 40 | 337   | 21 | 356   | 54 |
| 26 | 211   | 34 | 248   | 35 | 284   | 19 | 314   | 33 | 338   | 2  | 357   | 31 |
| 27 | 212   | 47 | 249   | 49 | 285   | 26 | 315   | 26 | 338   | 45 | 358   | 8  |
| 28 | 214   | 1  | 251   | 3  | 286   | 33 | 316   | 19 | 339   | 26 | 358   | 46 |
| 29 | 215   | 14 | 252   | 17 | 287   | 39 | 317   | 11 | 340   | 7  | 359   | 23 |
| 30 | 216   | 28 | 253   | 30 | 288   | 45 | 318   | 2  | 340   | 48 | 360   | 0  |



# TABVLA ASCENSIONVM OBLIQVARVM

| 6  | V     |    | 8     |    | II    |    | 6     |    | 9     |    | np    |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |
| 0  | 0     | 0  | 17    | 29 | 38    | 45 | 67    | 23 | 103   | 17 | 141   | 49 |
| 1  | 0     | 34 | 18    | 7  | 39    | 34 | 68    | 20 | 104   | 33 | 143   | 6  |
| 2  | 1     | 8  | 18    | 45 | 40    | 24 | 69    | 35 | 105   | 50 | 144   | 23 |
| 3  | 1     | 41 | 19    | 23 | 41    | 14 | 70    | 42 | 107   | 6  | 145   | 40 |
| 4  | 2     | 15 | 20    | 1  | 42    | 5  | 71    | 49 | 108   | 23 | 146   | 57 |
| 5  | 2     | 49 | 20    | 39 | 42    | 56 | 72    | 57 | 109   | 39 | 148   | 14 |
| 6  | 3     | 23 | 21    | 19 | 43    | 48 | 74    | 6  | 110   | 56 | 149   | 30 |
| 7  | 3     | 57 | 21    | 58 | 44    | 41 | 75    | 15 | 112   | 13 | 150   | 47 |
| 8  | 4     | 31 | 22    | 37 | 45    | 34 | 76    | 24 | 113   | 30 | 152   | 4  |
| 9  | 5     | 5  | 23    | 17 | 46    | 27 | 77    | 33 | 114   | 47 | 153   | 20 |
| 10 | 5     | 39 | 23    | 58 | 47    | 21 | 78    | 43 | 116   | 4  | 154   | 37 |
| 11 | 6     | 13 | 24    | 38 | 48    | 16 | 79    | 54 | 117   | 22 | 155   | 53 |
| 12 | 6     | 48 | 25    | 19 | 49    | 11 | 81    | 5  | 118   | 39 | 157   | 10 |
| 13 | 7     | 22 | 26    | 0  | 50    | 7  | 82    | 16 | 119   | 56 | 158   | 26 |
| 14 | 7     | 56 | 26    | 42 | 51    | 4  | 83    | 28 | 121   | 14 | 159   | 42 |
| 15 | 8     | 31 | 27    | 24 | 52    | 0  | 84    | 40 | 122   | 31 | 160   | 59 |
| 16 | 9     | 6  | 28    | 6  | 52    | 58 | 85    | 53 | 123   | 48 | 162   | 15 |
| 17 | 9     | 41 | 28    | 49 | 53    | 56 | 87    | 5  | 125   | 6  | 163   | 31 |
| 18 | 10    | 16 | 29    | 32 | 54    | 55 | 88    | 19 | 126   | 23 | 164   | 48 |
| 19 | 10    | 50 | 30    | 16 | 55    | 54 | 89    | 32 | 127   | 40 | 166   | 4  |
| 20 | 11    | 26 | 31    | 0  | 56    | 54 | 90    | 46 | 128   | 58 | 167   | 20 |
| 21 | 12    | 1  | 31    | 44 | 57    | 54 | 92    | 0  | 130   | 15 | 168   | 36 |
| 22 | 12    | 37 | 32    | 29 | 58    | 55 | 93    | 14 | 131   | 32 | 169   | 52 |
| 23 | 13    | 13 | 33    | 15 | 59    | 57 | 94    | 29 | 132   | 49 | 171   | 8  |
| 24 | 13    | 49 | 34    | 0  | 60    | 59 | 95    | 44 | 134   | 7  | 172   | 24 |
| 25 | 14    | 25 | 34    | 46 | 62    | 2  | 96    | 59 | 135   | 24 | 173   | 40 |
| 26 | 15    | 1  | 35    | 33 | 63    | 5  | 98    | 14 | 136   | 41 | 174   | 56 |
| 27 | 15    | 38 | 36    | 20 | 64    | 9  | 99    | 29 | 137   | 58 | 176   | 12 |
| 28 | 16    | 15 | 37    | 8  | 65    | 13 | 100   | 45 | 139   | 14 | 177   | 38 |
| 29 | 16    | 52 | 37    | 56 | 66    | 18 | 102   | 1  | 140   | 32 | 178   | 44 |
| 30 | 17    | 29 | 38    | 45 | 67    | 23 | 103   | 17 | 141   | 49 | 180   | 0  |



# AD LATITVDINEM 41. GRADVVM. 179

| g     | ☾   | m     | ♄   | ♅     | ♁   | ♂     | ♂   | ♂     | ♂   |
|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|
| temp. | /   | temp. | /   | temp. | /   | temp. | /   | temp. | /   |
| 0     | 180 | 0     | 218 | 11    | 256 | 43    | 292 | 37    | 321 |
| 1     | 181 | 16    | 219 | 28    | 257 | 59    | 293 | 42    | 323 |
| 2     | 182 | 32    | 220 | 46    | 259 | 15    | 294 | 47    | 322 |
| 3     | 183 | 48    | 222 | 2     | 260 | 31    | 295 | 51    | 323 |
| 4     | 185 | 4     | 223 | 19    | 261 | 46    | 296 | 55    | 324 |
| 5     | 186 | 20    | 224 | 36    | 263 | 1     | 297 | 57    | 325 |
| 6     | 187 | 36    | 225 | 53    | 264 | 16    | 299 | 1     | 326 |
| 7     | 188 | 52    | 227 | 11    | 265 | 31    | 300 | 3     | 326 |
| 8     | 190 | 8     | 228 | 28    | 266 | 46    | 301 | 5     | 327 |
| 9     | 191 | 24    | 229 | 45    | 268 | 0     | 302 | 6     | 328 |
| 10    | 192 | 40    | 231 | 2     | 269 | 14    | 303 | 6     | 329 |
| 11    | 193 | 56    | 232 | 20    | 270 | 28    | 304 | 6     | 329 |
| 12    | 195 | 12    | 233 | 37    | 271 | 41    | 305 | 5     | 330 |
| 13    | 196 | 29    | 234 | 54    | 272 | 55    | 306 | 4     | 331 |
| 14    | 197 | 45    | 236 | 12    | 274 | 7     | 307 | 2     | 331 |
| 15    | 199 | 1     | 237 | 29    | 275 | 20    | 308 | 0     | 332 |
| 16    | 200 | 18    | 238 | 46    | 276 | 32    | 308 | 56    | 333 |
| 17    | 201 | 34    | 240 | 4     | 277 | 44    | 309 | 53    | 334 |
| 18    | 202 | 50    | 241 | 21    | 278 | 55    | 310 | 49    | 334 |
| 19    | 204 | 7     | 242 | 38    | 280 | 6     | 311 | 44    | 335 |
| 20    | 205 | 23    | 243 | 56    | 281 | 17    | 312 | 39    | 336 |
| 21    | 206 | 40    | 245 | 13    | 282 | 27    | 313 | 33    | 336 |
| 22    | 207 | 56    | 246 | 30    | 283 | 36    | 314 | 26    | 337 |
| 23    | 209 | 13    | 247 | 47    | 284 | 45    | 315 | 19    | 338 |
| 24    | 210 | 30    | 249 | 4     | 285 | 54    | 316 | 12    | 338 |
| 25    | 211 | 46    | 250 | 21    | 287 | 3     | 317 | 4     | 339 |
| 26    | 213 | 3     | 251 | 37    | 288 | 11    | 317 | 55    | 339 |
| 27    | 214 | 20    | 252 | 54    | 289 | 18    | 318 | 46    | 340 |
| 28    | 215 | 37    | 254 | 10    | 290 | 25    | 319 | 36    | 341 |
| 29    | 216 | 54    | 255 | 27    | 291 | 31    | 320 | 26    | 341 |
| 30    | 218 | 11    | 256 | 43    | 292 | 37    | 321 | 15    | 342 |



# TABVLA ASCENSIONVM OBLIQVARVM

| ̄  | V     |    | ̄     |    | II    |    | ̄     |    | ̄     |    | ̄     |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. |    | temp. |    | temp. |    | temp. |    | temp. |    | temp. |    |
| 0  | 0     | 0  | 15    | 55 | 35    | 46 | 63    | 44 | 100   | 18 | 140   | 15 |
| 1  | 0     | 31 | 16    | 29 | 36    | 32 | 64    | 50 | 101   | 36 | 141   | 35 |
| 2  | 1     | 1  | 17    | 4  | 37    | 20 | 65    | 56 | 102   | 55 | 142   | 55 |
| 3  | 1     | 32 | 17    | 39 | 38    | 8  | 67    | 4  | 104   | 14 | 144   | 15 |
| 4  | 2     | 2  | 18    | 14 | 38    | 57 | 68    | 12 | 105   | 33 | 145   | 35 |
| 5  | 2     | 33 | 18    | 50 | 39    | 46 | 69    | 20 | 106   | 52 | 146   | 55 |
| 6  | 3     | 4  | 19    | 26 | 40    | 36 | 70    | 29 | 108   | 12 | 148   | 14 |
| 7  | 3     | 35 | 20    | 2  | 41    | 27 | 71    | 38 | 109   | 31 | 149   | 34 |
| 8  | 4     | 5  | 20    | 38 | 42    | 18 | 72    | 48 | 110   | 51 | 150   | 54 |
| 9  | 4     | 36 | 21    | 15 | 43    | 9  | 73    | 59 | 112   | 11 | 152   | 14 |
| 10 | 5     | 7  | 21    | 53 | 44    | 1  | 75    | 10 | 113   | 31 | 153   | 33 |
| 11 | 5     | 38 | 22    | 30 | 44    | 55 | 76    | 21 | 114   | 51 | 154   | 53 |
| 12 | 6     | 9  | 23    | 8  | 44    | 48 | 77    | 33 | 116   | 21 | 156   | 13 |
| 13 | 6     | 41 | 23    | 46 | 46    | 42 | 78    | 46 | 117   | 31 | 157   | 32 |
| 14 | 7     | 12 | 24    | 25 | 47    | 37 | 79    | 59 | 118   | 51 | 158   | 52 |
| 15 | 7     | 43 | 25    | 4  | 48    | 32 | 81    | 12 | 120   | 11 | 160   | 11 |
| 16 | 8     | 15 | 25    | 44 | 49    | 29 | 82    | 26 | 121   | 31 | 161   | 31 |
| 17 | 8     | 47 | 26    | 24 | 50    | 26 | 83    | 40 | 122   | 52 | 162   | 50 |
| 18 | 9     | 19 | 27    | 4  | 51    | 23 | 84    | 55 | 124   | 12 | 164   | 9  |
| 19 | 9     | 51 | 27    | 45 | 52    | 21 | 86    | 10 | 125   | 32 | 165   | 29 |
| 20 | 10    | 23 | 28    | 26 | 53    | 20 | 87    | 26 | 126   | 52 | 166   | 48 |
| 21 | 10    | 55 | 29    | 8  | 54    | 19 | 88    | 42 | 128   | 13 | 168   | 7  |
| 22 | 11    | 27 | 29    | 50 | 55    | 20 | 89    | 58 | 129   | 33 | 169   | 27 |
| 23 | 12    | 0  | 30    | 33 | 56    | 20 | 91    | 14 | 130   | 53 | 170   | 46 |
| 24 | 12    | 33 | 31    | 16 | 57    | 22 | 92    | 31 | 132   | 14 | 172   | 5  |
| 25 | 13    | 6  | 31    | 59 | 58    | 24 | 93    | 48 | 133   | 34 | 173   | 24 |
| 26 | 13    | 40 | 32    | 44 | 59    | 27 | 95    | 5  | 134   | 54 | 174   | 43 |
| 27 | 14    | 13 | 33    | 28 | 60    | 30 | 96    | 23 | 136   | 14 | 176   | 3  |
| 28 | 14    | 46 | 34    | 14 | 61    | 34 | 97    | 41 | 137   | 35 | 177   | 22 |
| 29 | 15    | 20 | 34    | 59 | 62    | 39 | 98    | 59 | 138   | 55 | 178   | 41 |
| 30 | 15    | 55 | 35    | 46 | 63    | 44 | 100   | 18 | 140   | 15 | 180   | 0  |



# AD LATITVDINEM 45. GRADVVM.

180

| g     | h   | m     | n   | o     | p   | q     | r   | s     | t   | u     | v   |    |
|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|----|
| temp. | /   | temp. | /   | temp. | /   | temp. | /   | temp. | /   | temp. | /   |    |
| 0     | 180 | 0     | 219 | 45    | 259 | 42    | 296 | 16    | 324 | 14    | 344 | 5  |
| 1     | 181 | 19    | 221 | 5     | 261 | 1     | 297 | 21    | 325 | 1     | 344 | 40 |
| 2     | 182 | 38    | 222 | 25    | 262 | 19    | 298 | 26    | 325 | 46    | 345 | 14 |
| 3     | 183 | 57    | 223 | 46    | 263 | 37    | 299 | 30    | 326 | 32    | 345 | 47 |
| 4     | 185 | 17    | 225 | 6     | 264 | 55    | 300 | 33    | 327 | 16    | 346 | 20 |
| 5     | 186 | 36    | 226 | 26    | 266 | 12    | 301 | 36    | 328 | 1     | 346 | 54 |
| 6     | 187 | 55    | 227 | 46    | 267 | 29    | 302 | 38    | 328 | 44    | 347 | 27 |
| 7     | 189 | 14    | 229 | 7     | 268 | 46    | 303 | 40    | 329 | 27    | 348 | 0  |
| 8     | 190 | 33    | 230 | 27    | 270 | 2     | 304 | 40    | 330 | 10    | 348 | 33 |
| 9     | 191 | 53    | 231 | 47    | 271 | 18    | 305 | 41    | 330 | 52    | 349 | 5  |
| 10    | 193 | 12    | 233 | 8     | 272 | 34    | 306 | 40    | 331 | 34    | 349 | 37 |
| 11    | 194 | 31    | 234 | 28    | 273 | 50    | 307 | 39    | 332 | 15    | 350 | 9  |
| 12    | 195 | 51    | 235 | 48    | 275 | 5     | 308 | 37    | 332 | 56    | 350 | 41 |
| 13    | 197 | 10    | 237 | 8     | 276 | 20    | 309 | 34    | 333 | 36    | 351 | 13 |
| 14    | 198 | 29    | 238 | 29    | 277 | 34    | 310 | 31    | 334 | 16    | 351 | 35 |
| 15    | 199 | 49    | 239 | 49    | 278 | 48    | 311 | 28    | 334 | 56    | 352 | 17 |
| 16    | 201 | 8     | 241 | 9     | 280 | 1     | 312 | 23    | 335 | 35    | 352 | 48 |
| 17    | 202 | 28    | 242 | 29    | 281 | 14    | 313 | 18    | 336 | 14    | 353 | 19 |
| 18    | 203 | 47    | 243 | 49    | 282 | 27    | 314 | 12    | 336 | 52    | 353 | 51 |
| 19    | 205 | 7     | 245 | 9     | 283 | 39    | 315 | 5     | 337 | 30    | 354 | 22 |
| 20    | 206 | 27    | 246 | 29    | 284 | 50    | 315 | 59    | 338 | 17    | 354 | 53 |
| 21    | 207 | 46    | 247 | 49    | 286 | 1     | 316 | 51    | 338 | 45    | 355 | 24 |
| 22    | 209 | 6     | 249 | 9     | 287 | 12    | 317 | 42    | 339 | 22    | 355 | 55 |
| 23    | 210 | 26    | 250 | 29    | 288 | 22    | 318 | 33    | 339 | 58    | 356 | 25 |
| 24    | 211 | 46    | 251 | 48    | 289 | 31    | 319 | 24    | 340 | 34    | 356 | 56 |
| 25    | 213 | 5     | 253 | 8     | 290 | 40    | 320 | 14    | 341 | 10    | 357 | 27 |
| 26    | 214 | 25    | 254 | 27    | 291 | 48    | 321 | 3     | 341 | 46    | 357 | 58 |
| 27    | 215 | 45    | 255 | 46    | 292 | 56    | 321 | 52    | 342 | 21    | 358 | 28 |
| 28    | 217 | 5     | 257 | 5     | 294 | 4     | 322 | 40    | 342 | 56    | 358 | 59 |
| 29    | 218 | 25    | 258 | 24    | 295 | 10    | 323 | 28    | 343 | 31    | 359 | 29 |
| 30    | 219 | 45    | 259 | 42    | 296 | 16    | 324 | 14    | 344 | 5     | 360 | 0  |



# TABVLA ASCENSIONVM OBLIQVARVM

| ̄6 | V     |    | ♄     |    | II    |    | ♅     |    | ♆     |    | ♇     |    | mp |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |    |
| 0  | 0     | 0  | 14    | 34 | 33    | 11 | 60    | 34 | 97    | 43 | 138   | 54 |    |
| 1  | 0     | 28 | 15    | 6  | 33    | 56 | 61    | 40 | 99    | 3  | 140   | 17 |    |
| 2  | 0     | 56 | 15    | 38 | 34    | 41 | 62    | 46 | 100   | 24 | 141   | 40 |    |
| 3  | 1     | 24 | 16    | 10 | 35    | 27 | 63    | 54 | 101   | 45 | 143   | 2  |    |
| 4  | 1     | 52 | 16    | 43 | 36    | 14 | 65    | 2  | 103   | 7  | 144   | 25 |    |
| 5  | 2     | 20 | 17    | 16 | 37    | 1  | 66    | 11 | 104   | 28 | 145   | 47 |    |
| 6  | 2     | 48 | 17    | 49 | 37    | 49 | 67    | 20 | 105   | 50 | 147   | 10 |    |
| 7  | 3     | 16 | 18    | 23 | 38    | 38 | 68    | 30 | 107   | 12 | 148   | 33 |    |
| 8  | 3     | 44 | 18    | 57 | 39    | 27 | 69    | 41 | 108   | 34 | 149   | 55 |    |
| 9  | 4     | 12 | 19    | 31 | 40    | 17 | 70    | 52 | 109   | 56 | 151   | 17 |    |
| 10 | 4     | 40 | 19    | 6  | 41    | 8  | 72    | 4  | 111   | 19 | 152   | 40 |    |
| 11 | 5     | 9  | 20    | 41 | 41    | 59 | 73    | 16 | 112   | 41 | 154   | 2  |    |
| 12 | 5     | 37 | 21    | 16 | 42    | 51 | 74    | 29 | 114   | 4  | 155   | 24 |    |
| 13 | 6     | 6  | 21    | 52 | 43    | 44 | 75    | 43 | 115   | 26 | 156   | 47 |    |
| 14 | 6     | 34 | 22    | 28 | 44    | 38 | 76    | 57 | 116   | 49 | 158   | 9  |    |
| 15 | 7     | 3  | 23    | 4  | 45    | 32 | 78    | 11 | 118   | 11 | 159   | 31 |    |
| 16 | 7     | 32 | 23    | 41 | 46    | 27 | 79    | 27 | 119   | 34 | 160   | 53 |    |
| 17 | 8     | 1  | 24    | 19 | 47    | 23 | 80    | 43 | 120   | 57 | 162   | 15 |    |
| 18 | 8     | 30 | 24    | 57 | 48    | 19 | 81    | 59 | 122   | 20 | 163   | 37 |    |
| 19 | 8     | 59 | 25    | 35 | 49    | 16 | 83    | 15 | 123   | 43 | 164   | 59 |    |
| 20 | 9     | 29 | 26    | 14 | 50    | 14 | 84    | 32 | 125   | 6  | 166   | 21 |    |
| 21 | 9     | 58 | 26    | 53 | 51    | 13 | 85    | 50 | 126   | 28 | 167   | 43 |    |
| 22 | 10    | 28 | 27    | 33 | 52    | 12 | 87    | 8  | 127   | 51 | 169   | 5  |    |
| 23 | 10    | 58 | 28    | 13 | 53    | 12 | 88    | 26 | 129   | 14 | 170   | 27 |    |
| 24 | 11    | 28 | 28    | 54 | 54    | 13 | 89    | 44 | 130   | 37 | 171   | 49 |    |
| 25 | 11    | 59 | 29    | 36 | 55    | 15 | 91    | 3  | 132   | 0  | 173   | 31 |    |
| 26 | 12    | 29 | 30    | 18 | 56    | 17 | 92    | 22 | 133   | 23 | 174   | 33 |    |
| 27 | 13    | 0  | 31    | 0  | 57    | 20 | 93    | 42 | 134   | 46 | 175   | 54 |    |
| 28 | 13    | 31 | 31    | 43 | 58    | 24 | 95    | 2  | 136   | 8  | 177   | 16 |    |
| 29 | 14    | 2  | 32    | 27 | 59    | 29 | 96    | 22 | 137   | 31 | 178   | 38 |    |
| 30 | 14    | 34 | 33    | 11 | 60    | 34 | 97    | 43 | 138   | 54 | 180   | 0  |    |



## AD LATITVDINEM 48. GRADVVM.

| g     | h   | m     | n   | o     | p   | q     | r   | s     | t   | u     | v   |    |
|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|----|
| temp. | /   | temp. | /   | temp. | /   | temp. | /   | temp. | /   | temp. | /   |    |
| 0     | 180 | 0     | 221 | 6     | 261 | 17    | 299 | 26    | 326 | 49    | 345 | 26 |
| 1     | 181 | 22    | 222 | 29    | 263 | 38    | 300 | 31    | 327 | 33    | 345 | 58 |
| 2     | 182 | 44    | 223 | 52    | 264 | 58    | 301 | 36    | 328 | 17    | 346 | 29 |
| 3     | 184 | 6     | 225 | 14    | 266 | 18    | 302 | 40    | 329 | 0     | 347 | 0  |
| 4     | 185 | 27    | 226 | 37    | 267 | 38    | 303 | 43    | 329 | 42    | 347 | 31 |
| 5     | 186 | 49    | 228 | 0     | 268 | 57    | 304 | 45    | 330 | 24    | 348 | 1  |
| 6     | 188 | 11    | 229 | 23    | 270 | 16    | 305 | 47    | 331 | 6     | 348 | 32 |
| 7     | 189 | 33    | 230 | 46    | 271 | 34    | 306 | 48    | 331 | 47    | 349 | 2  |
| 8     | 190 | 55    | 232 | 9     | 272 | 52    | 307 | 48    | 332 | 27    | 349 | 32 |
| 9     | 192 | 17    | 233 | 32    | 274 | 10    | 308 | 47    | 333 | 7     | 350 | 2  |
| 10    | 193 | 39    | 234 | 54    | 275 | 28    | 309 | 46    | 333 | 46    | 350 | 31 |
| 11    | 195 | 1     | 236 | 17    | 276 | 45    | 310 | 44    | 334 | 25    | 351 | 1  |
| 12    | 196 | 23    | 237 | 40    | 278 | 1     | 311 | 41    | 335 | 3     | 351 | 30 |
| 13    | 197 | 45    | 239 | 3     | 279 | 17    | 312 | 37    | 335 | 41    | 351 | 59 |
| 14    | 199 | 7     | 240 | 26    | 280 | 33    | 313 | 33    | 336 | 19    | 352 | 28 |
| 15    | 200 | 29    | 241 | 49    | 281 | 49    | 314 | 28    | 336 | 56    | 352 | 57 |
| 16    | 201 | 51    | 243 | 11    | 283 | 3     | 315 | 22    | 337 | 32    | 353 | 26 |
| 17    | 203 | 13    | 244 | 34    | 284 | 17    | 316 | 16    | 338 | 8     | 353 | 54 |
| 18    | 204 | 36    | 245 | 56    | 285 | 31    | 317 | 9     | 338 | 44    | 354 | 23 |
| 19    | 205 | 58    | 247 | 19    | 286 | 44    | 318 | 1     | 339 | 19    | 354 | 51 |
| 20    | 207 | 20    | 248 | 41    | 287 | 56    | 318 | 52    | 339 | 54    | 355 | 20 |
| 21    | 208 | 43    | 250 | 4     | 289 | 8     | 319 | 43    | 340 | 29    | 355 | 48 |
| 22    | 210 | 5     | 251 | 26    | 290 | 19    | 320 | 33    | 341 | 3     | 356 | 16 |
| 23    | 211 | 27    | 252 | 48    | 291 | 30    | 321 | 22    | 341 | 37    | 356 | 44 |
| 24    | 212 | 50    | 254 | 10    | 292 | 49    | 322 | 11    | 342 | 11    | 357 | 12 |
| 25    | 214 | 13    | 255 | 32    | 293 | 49    | 322 | 59    | 342 | 44    | 357 | 40 |
| 26    | 215 | 35    | 256 | 53    | 294 | 58    | 323 | 46    | 343 | 17    | 358 | 8  |
| 27    | 216 | 58    | 258 | 15    | 296 | 6     | 324 | 33    | 343 | 50    | 358 | 36 |
| 28    | 218 | 20    | 259 | 36    | 297 | 14    | 325 | 19    | 344 | 22    | 359 | 4  |
| 29    | 219 | 43    | 260 | 57    | 298 | 20    | 326 | 4     | 344 | 54    | 359 | 32 |
| 30    | 221 | 6     | 262 | 17    | 299 | 26    | 326 | 49    | 345 | 16    | 360 | 0  |



# TABVLA ASCENSIONVM OBLIQVARVM

| ♄  | V     |    | ♅     |    | II    |    | ♄     |    | ♅     |    | ♄     |    | ♄     |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|
|    | temp. |    | temp. |    | temp. |    | temp. |    | temp. |    | temp. |    | temp. |
| 0  | 0     | 0  | 13    | 3  | 30    | 13 | 56    | 53 | 94    | 45 | 137   | 24 |       |
| 1  | 0     | 25 | 13    | 32 | 30    | 55 | 57    | 59 | 96    | 8  | 138   | 49 |       |
| 2  | 0     | 50 | 14    | 1  | 31    | 38 | 59    | 6  | 97    | 31 | 140   | 15 |       |
| 3  | 1     | 15 | 14    | 30 | 32    | 22 | 60    | 13 | 98    | 55 | 141   | 40 |       |
| 4  | 1     | 40 | 15    | 0  | 33    | 6  | 61    | 21 | 100   | 19 | 143   | 6  |       |
| 5  | 2     | 5  | 15    | 30 | 33    | 51 | 62    | 31 | 101   | 43 | 144   | 32 |       |
| 6  | 2     | 30 | 16    | 0  | 34    | 37 | 63    | 41 | 103   | 8  | 145   | 57 |       |
| 7  | 2     | 55 | 16    | 31 | 35    | 24 | 64    | 52 | 104   | 33 | 147   | 23 |       |
| 8  | 3     | 20 | 17    | 1  | 36    | 11 | 66    | 3  | 105   | 57 | 148   | 48 |       |
| 9  | 3     | 45 | 17    | 33 | 36    | 58 | 67    | 15 | 107   | 23 | 150   | 14 |       |
| 10 | 4     | 10 | 18    | 4  | 37    | 47 | 68    | 28 | 108   | 48 | 151   | 39 |       |
| 11 | 4     | 35 | 18    | 36 | 38    | 37 | 69    | 42 | 110   | 13 | 153   | 5  |       |
| 12 | 5     | 1  | 19    | 9  | 39    | 27 | 70    | 56 | 111   | 38 | 154   | 30 |       |
| 13 | 5     | 26 | 19    | 42 | 40    | 18 | 72    | 11 | 113   | 4  | 155   | 55 |       |
| 14 | 5     | 52 | 20    | 15 | 41    | 10 | 73    | 26 | 114   | 30 | 157   | 20 |       |
| 15 | 6     | 18 | 20    | 48 | 42    | 2  | 74    | 42 | 115   | 55 | 158   | 46 |       |
| 16 | 6     | 44 | 21    | 22 | 42    | 56 | 75    | 59 | 117   | 21 | 160   | 11 |       |
| 17 | 7     | 10 | 21    | 57 | 43    | 50 | 77    | 16 | 118   | 47 | 161   | 36 |       |
| 18 | 7     | 36 | 22    | 32 | 44    | 45 | 78    | 34 | 120   | 12 | 163   | 1  |       |
| 19 | 8     | 2  | 23    | 7  | 45    | 41 | 79    | 52 | 121   | 38 | 164   | 26 |       |
| 20 | 8     | 28 | 23    | 43 | 46    | 38 | 81    | 11 | 123   | 4  | 165   | 51 |       |
| 21 | 8     | 55 | 24    | 20 | 47    | 36 | 82    | 31 | 124   | 30 | 167   | 16 |       |
| 22 | 9     | 22 | 24    | 56 | 48    | 34 | 83    | 51 | 125   | 56 | 168   | 41 |       |
| 23 | 9     | 49 | 25    | 34 | 49    | 34 | 85    | 11 | 127   | 22 | 170   | 6  |       |
| 24 | 10    | 16 | 26    | 12 | 50    | 34 | 86    | 32 | 128   | 48 | 171   | 31 |       |
| 25 | 10    | 43 | 26    | 51 | 51    | 35 | 87    | 53 | 130   | 14 | 172   | 56 |       |
| 26 | 11    | 11 | 27    | 30 | 52    | 37 | 89    | 15 | 131   | 40 | 174   | 21 |       |
| 27 | 11    | 38 | 28    | 10 | 53    | 40 | 90    | 37 | 133   | 6  | 175   | 45 |       |
| 28 | 12    | 6  | 28    | 50 | 54    | 43 | 91    | 59 | 134   | 31 | 177   | 10 |       |
| 29 | 12    | 35 | 29    | 31 | 55    | 47 | 93    | 22 | 135   | 57 | 178   | 35 |       |
| 30 | 13    | 3  | 30    | 13 | 56    | 53 | 94    | 45 | 137   | 24 | 180   | 0  |       |



## AD LATITVDINEM 51. GRADVVM.

| 6  | ♊     | ♈  | ♉     | ♊  | ♈     | ♉  | ♊     | ♈  | ♉     | ♊  | ♈     | ♉  |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |
| 0  | 180   | 0  | 222   | 36 | 265   | 15 | 303   | 7  | 329   | 47 | 346   | 57 |
| 1  | 181   | 25 | 224   | 3  | 266   | 38 | 304   | 13 | 330   | 29 | 347   | 25 |
| 2  | 182   | 50 | 225   | 29 | 268   | 1  | 305   | 17 | 331   | 10 | 347   | 54 |
| 3  | 184   | 15 | 226   | 54 | 269   | 23 | 306   | 20 | 331   | 50 | 348   | 22 |
| 4  | 185   | 39 | 228   | 20 | 270   | 45 | 307   | 23 | 332   | 30 | 348   | 49 |
| 5  | 187   | 4  | 229   | 46 | 272   | 7  | 308   | 25 | 333   | 9  | 349   | 17 |
| 6  | 188   | 29 | 231   | 12 | 273   | 28 | 309   | 26 | 333   | 48 | 349   | 44 |
| 7  | 189   | 54 | 232   | 38 | 274   | 49 | 310   | 26 | 334   | 26 | 350   | 11 |
| 8  | 191   | 19 | 234   | 4  | 276   | 9  | 311   | 26 | 335   | 4  | 350   | 38 |
| 9  | 192   | 44 | 235   | 30 | 277   | 29 | 312   | 24 | 335   | 40 | 351   | 5  |
| 10 | 194   | 9  | 236   | 56 | 278   | 49 | 313   | 22 | 336   | 17 | 351   | 32 |
| 11 | 195   | 34 | 238   | 22 | 280   | 8  | 314   | 19 | 336   | 53 | 351   | 58 |
| 12 | 196   | 59 | 239   | 48 | 281   | 26 | 315   | 15 | 337   | 28 | 352   | 24 |
| 13 | 198   | 24 | 241   | 13 | 282   | 44 | 316   | 10 | 338   | 3  | 352   | 50 |
| 14 | 199   | 49 | 242   | 39 | 284   | 1  | 317   | 4  | 338   | 38 | 353   | 16 |
| 15 | 201   | 14 | 244   | 5  | 285   | 18 | 317   | 58 | 339   | 12 | 353   | 42 |
| 16 | 202   | 40 | 245   | 30 | 286   | 34 | 318   | 50 | 339   | 45 | 354   | 8  |
| 17 | 204   | 5  | 246   | 56 | 287   | 49 | 319   | 42 | 340   | 18 | 354   | 34 |
| 18 | 205   | 30 | 248   | 22 | 289   | 4  | 320   | 33 | 340   | 51 | 354   | 59 |
| 19 | 206   | 55 | 249   | 47 | 290   | 18 | 321   | 23 | 341   | 24 | 355   | 25 |
| 20 | 208   | 21 | 251   | 12 | 291   | 32 | 322   | 13 | 341   | 56 | 355   | 50 |
| 21 | 209   | 46 | 252   | 37 | 292   | 45 | 323   | 2  | 342   | 27 | 356   | 15 |
| 22 | 211   | 12 | 254   | 3  | 293   | 57 | 323   | 49 | 342   | 59 | 356   | 40 |
| 23 | 212   | 37 | 255   | 27 | 295   | 8  | 324   | 36 | 343   | 29 | 357   | 5  |
| 24 | 214   | 3  | 256   | 52 | 296   | 19 | 325   | 23 | 344   | 0  | 357   | 30 |
| 25 | 215   | 28 | 258   | 17 | 297   | 29 | 326   | 9  | 344   | 30 | 357   | 55 |
| 26 | 216   | 54 | 259   | 41 | 298   | 39 | 326   | 54 | 345   | 0  | 358   | 20 |
| 27 | 218   | 20 | 261   | 5  | 299   | 47 | 327   | 38 | 345   | 30 | 358   | 45 |
| 28 | 219   | 45 | 262   | 29 | 300   | 54 | 328   | 22 | 345   | 59 | 359   | 10 |
| 29 | 221   | 11 | 263   | 52 | 302   | 1  | 329   | 5  | 346   | 28 | 359   | 35 |
| 30 | 222   | 36 | 265   | 15 | 303   | 7  | 329   | 47 | 346   | 57 | 360   | 0  |



# TABVLA ASCENSIONVM OBLIQVARVM

| ♄  | V     |    | ♅     |    | II    |    | ♄     |    | ♅     |    | ♄     |    | ♄ |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|---|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |   |
| 0  | 0     | 0  | 11    | 19 | 26    | 44 | 52    | 29 | 91    | 16 | 135   | 39 |   |
| 1  | 0     | 22 | 11    | 44 | 27    | 23 | 53    | 35 | 92    | 42 | 137   | 8  |   |
| 2  | 0     | 43 | 12    | 9  | 28    | 3  | 54    | 42 | 94    | 9  | 138   | 37 |   |
| 3  | 1     | 5  | 12    | 35 | 28    | 44 | 55    | 50 | 95    | 36 | 140   | 7  |   |
| 4  | 1     | 26 | 13    | 1  | 29    | 25 | 56    | 59 | 97    | 4  | 141   | 36 |   |
| 5  | 1     | 48 | 13    | 27 | 30    | 7  | 58    | 9  | 98    | 32 | 143   | 6  |   |
| 6  | 2     | 9  | 13    | 54 | 30    | 49 | 59    | 20 | 100   | 0  | 144   | 35 |   |
| 7  | 2     | 31 | 14    | 22 | 31    | 33 | 60    | 31 | 101   | 28 | 146   | 4  |   |
| 8  | 2     | 52 | 14    | 49 | 32    | 18 | 61    | 43 | 102   | 56 | 147   | 33 |   |
| 9  | 3     | 14 | 15    | 17 | 33    | 3  | 62    | 57 | 104   | 24 | 149   | 1  |   |
| 10 | 3     | 36 | 15    | 45 | 33    | 49 | 64    | 11 | 105   | 52 | 150   | 30 |   |
| 11 | 3     | 58 | 16    | 13 | 34    | 36 | 65    | 26 | 107   | 21 | 151   | 59 |   |
| 12 | 4     | 20 | 16    | 42 | 35    | 25 | 66    | 42 | 108   | 50 | 153   | 28 |   |
| 13 | 4     | 42 | 17    | 12 | 36    | 14 | 67    | 58 | 110   | 19 | 154   | 56 |   |
| 14 | 5     | 4  | 17    | 41 | 37    | 4  | 69    | 16 | 111   | 48 | 156   | 25 |   |
| 15 | 5     | 26 | 18    | 10 | 37    | 54 | 70    | 34 | 113   | 17 | 157   | 54 |   |
| 16 | 5     | 48 | 18    | 41 | 38    | 46 | 71    | 53 | 114   | 47 | 159   | 22 |   |
| 17 | 6     | 11 | 19    | 12 | 39    | 38 | 73    | 12 | 116   | 17 | 160   | 51 |   |
| 18 | 6     | 33 | 19    | 43 | 40    | 32 | 74    | 32 | 117   | 46 | 162   | 20 |   |
| 19 | 6     | 56 | 20    | 15 | 41    | 26 | 75    | 53 | 119   | 16 | 163   | 48 |   |
| 20 | 7     | 19 | 20    | 48 | 42    | 21 | 77    | 14 | 120   | 45 | 164   | 17 |   |
| 21 | 7     | 43 | 21    | 21 | 43    | 18 | 78    | 36 | 122   | 14 | 166   | 45 |   |
| 22 | 8     | 6  | 21    | 54 | 44    | 15 | 79    | 58 | 123   | 43 | 168   | 14 |   |
| 23 | 8     | 30 | 22    | 29 | 45    | 13 | 81    | 21 | 125   | 13 | 169   | 42 |   |
| 24 | 8     | 53 | 23    | 4  | 46    | 13 | 82    | 45 | 126   | 42 | 171   | 10 |   |
| 25 | 9     | 17 | 23    | 38 | 47    | 13 | 84    | 9  | 128   | 11 | 172   | 39 |   |
| 26 | 9     | 41 | 24    | 14 | 48    | 14 | 85    | 33 | 129   | 41 | 174   | 7  |   |
| 27 | 10    | 5  | 24    | 51 | 49    | 17 | 86    | 59 | 131   | 10 | 175   | 36 |   |
| 28 | 10    | 29 | 25    | 28 | 50    | 20 | 88    | 24 | 132   | 39 | 177   | 4  |   |
| 29 | 10    | 54 | 26    | 5  | 51    | 24 | 89    | 50 | 134   | 9  | 178   | 32 |   |
| 30 | 11    | 19 | 26    | 44 | 52    | 29 | 91    | 16 | 135   | 39 | 180   | 0  |   |



# AD LATITVDINEM 54. GRADVVM. 182

| ̄     | ̂   | ̃     | ̄   | ̂     | ̃   | ̄     | ̂   | ̃     | ̄   | ̂     | ̃   | ̄     | ̂ | ̃     |
|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|---|-------|
| temp. | /   | temp. | /   | temp. | /   | temp. | /   | temp. | /   | temp. | /   | temp. | / | temp. |
| 0     | 180 | 0     | 224 | 21    | 268 | 44    | 307 | 31    | 333 | 16    | 348 | 41    |   |       |
| 1     | 181 | 28    | 225 | 51    | 270 | 10    | 308 | 36    | 333 | 55    | 349 | 6     |   |       |
| 2     | 182 | 56    | 227 | 21    | 271 | 36    | 309 | 40    | 334 | 32    | 349 | 31    |   |       |
| 3     | 184 | 24    | 228 | 50    | 273 | 1     | 310 | 43    | 335 | 9     | 349 | 55    |   |       |
| 4     | 185 | 53    | 230 | 19    | 274 | 27    | 311 | 46    | 335 | 46    | 350 | 19    |   |       |
| 5     | 187 | 21    | 231 | 49    | 275 | 51    | 312 | 47    | 336 | 22    | 350 | 43    |   |       |
| 6     | 188 | 50    | 233 | 18    | 277 | 15    | 313 | 47    | 336 | 56    | 351 | 7     |   |       |
| 7     | 190 | 18    | 234 | 47    | 278 | 39    | 314 | 47    | 337 | 31    | 351 | 30    |   |       |
| 8     | 191 | 46    | 236 | 17    | 280 | 2     | 315 | 45    | 338 | 6     | 351 | 54    |   |       |
| 9     | 193 | 15    | 237 | 46    | 281 | 24    | 316 | 42    | 338 | 39    | 352 | 17    |   |       |
| 10    | 194 | 43    | 239 | 15    | 282 | 46    | 317 | 39    | 339 | 12    | 352 | 41    |   |       |
| 11    | 196 | 12    | 240 | 44    | 284 | 7     | 318 | 34    | 339 | 45    | 353 | 4     |   |       |
| 12    | 197 | 40    | 242 | 13    | 285 | 28    | 319 | 28    | 340 | 17    | 353 | 27    |   |       |
| 13    | 199 | 9     | 243 | 43    | 286 | 48    | 320 | 22    | 340 | 48    | 353 | 49    |   |       |
| 14    | 200 | 38    | 245 | 13    | 288 | 7     | 321 | 14    | 341 | 19    | 354 | 12    |   |       |
| 15    | 202 | 6     | 246 | 43    | 289 | 26    | 322 | 6     | 341 | 50    | 354 | 34    |   |       |
| 16    | 203 | 35    | 248 | 12    | 290 | 44    | 322 | 56    | 342 | 19    | 354 | 56    |   |       |
| 17    | 205 | 4     | 249 | 41    | 292 | 2     | 323 | 46    | 342 | 48    | 355 | 18    |   |       |
| 18    | 206 | 32    | 251 | 10    | 293 | 18    | 324 | 35    | 343 | 18    | 355 | 40    |   |       |
| 19    | 208 | 1     | 252 | 39    | 294 | 34    | 325 | 24    | 343 | 47    | 356 | 2     |   |       |
| 20    | 209 | 30    | 254 | 8     | 295 | 49    | 326 | 11    | 344 | 15    | 356 | 24    |   |       |
| 21    | 210 | 59    | 255 | 36    | 297 | 3     | 326 | 57    | 344 | 43    | 356 | 46    |   |       |
| 22    | 212 | 27    | 257 | 4     | 298 | 17    | 327 | 42    | 345 | 11    | 357 | 8     |   |       |
| 23    | 213 | 56    | 258 | 32    | 299 | 29    | 328 | 27    | 345 | 38    | 357 | 29    |   |       |
| 24    | 215 | 25    | 260 | 0     | 300 | 40    | 329 | 11    | 346 | 6     | 357 | 51    |   |       |
| 25    | 216 | 54    | 261 | 28    | 301 | 51    | 329 | 53    | 346 | 33    | 358 | 12    |   |       |
| 26    | 218 | 24    | 262 | 56    | 303 | 1     | 330 | 35    | 346 | 59    | 358 | 34    |   |       |
| 27    | 219 | 53    | 264 | 24    | 304 | 10    | 331 | 16    | 347 | 25    | 358 | 55    |   |       |
| 28    | 221 | 23    | 265 | 51    | 305 | 18    | 331 | 57    | 347 | 51    | 359 | 17    |   |       |
| 29    | 222 | 52    | 267 | 18    | 306 | 25    | 332 | 37    | 348 | 16    | 359 | 38    |   |       |
| 30    | 224 | 21    | 268 | 44    | 307 | 31    | 333 | 16    | 348 | 41    | 360 | 0     |   |       |



# TABVLA ASCENSIONVM OBLIQVARVM

| ♈  | V     |    | ♉     |    | ♊     |    | ♋     |    | ♌     |    | ♍     |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |
| 0  | 0     | 0  | 9     | 17 | 22    | 33 | 47    | 3  | 87    | 5  | 133   | 37 |
| 1  | 0     | 18 | 9     | 38 | 23    | 8  | 48    | 9  | 88    | 36 | 135   | 10 |
| 2  | 0     | 35 | 9     | 59 | 23    | 44 | 49    | 16 | 90    | 7  | 136   | 44 |
| 3  | 0     | 53 | 10    | 21 | 24    | 21 | 50    | 25 | 91    | 38 | 138   | 18 |
| 4  | 1     | 10 | 10    | 43 | 24    | 58 | 51    | 34 | 93    | 9  | 139   | 51 |
| 5  | 1     | 28 | 11    | 5  | 25    | 36 | 52    | 45 | 94    | 41 | 141   | 24 |
| 6  | 1     | 45 | 11    | 28 | 26    | 16 | 53    | 57 | 96    | 14 | 142   | 57 |
| 7  | 2     | 3  | 11    | 50 | 26    | 56 | 55    | 10 | 97    | 46 | 144   | 31 |
| 8  | 2     | 20 | 12    | 13 | 27    | 37 | 56    | 23 | 99    | 18 | 146   | 4  |
| 9  | 2     | 38 | 12    | 36 | 28    | 19 | 57    | 38 | 100   | 51 | 147   | 37 |
| 10 | 3     | 56 | 13    | 0  | 29    | 1  | 58    | 54 | 102   | 25 | 149   | 10 |
| 11 | 3     | 14 | 13    | 24 | 39    | 45 | 60    | 11 | 103   | 57 | 150   | 43 |
| 12 | 3     | 31 | 13    | 48 | 30    | 30 | 61    | 30 | 105   | 30 | 152   | 16 |
| 13 | 3     | 49 | 14    | 13 | 31    | 15 | 62    | 49 | 107   | 4  | 153   | 48 |
| 14 | 4     | 8  | 14    | 38 | 32    | 2  | 64    | 9  | 108   | 38 | 155   | 21 |
| 15 | 4     | 26 | 15    | 4  | 32    | 50 | 65    | 30 | 110   | 11 | 156   | 54 |
| 16 | 4     | 44 | 15    | 30 | 33    | 39 | 66    | 51 | 111   | 45 | 158   | 26 |
| 17 | 5     | 3  | 15    | 57 | 34    | 29 | 68    | 13 | 113   | 18 | 159   | 59 |
| 18 | 5     | 21 | 16    | 24 | 35    | 19 | 69    | 37 | 114   | 52 | 161   | 31 |
| 19 | 5     | 40 | 16    | 52 | 36    | 11 | 71    | 0  | 116   | 26 | 163   | 4  |
| 20 | 5     | 59 | 17    | 20 | 37    | 5  | 72    | 25 | 118   | 0  | 164   | 37 |
| 21 | 6     | 18 | 17    | 48 | 37    | 59 | 73    | 51 | 119   | 34 | 166   | 9  |
| 22 | 6     | 37 | 18    | 17 | 38    | 55 | 75    | 17 | 121   | 8  | 167   | 41 |
| 23 | 6     | 56 | 18    | 47 | 39    | 52 | 76    | 44 | 122   | 42 | 169   | 14 |
| 24 | 7     | 16 | 19    | 18 | 40    | 50 | 78    | 11 | 124   | 15 | 170   | 46 |
| 25 | 7     | 36 | 19    | 48 | 41    | 49 | 79    | 38 | 125   | 49 | 172   | 19 |
| 26 | 7     | 56 | 20    | 20 | 42    | 49 | 81    | 7  | 127   | 23 | 173   | 51 |
| 27 | 8     | 16 | 20    | 53 | 43    | 51 | 82    | 36 | 128   | 56 | 175   | 24 |
| 28 | 8     | 36 | 21    | 26 | 44    | 54 | 84    | 5  | 130   | 29 | 176   | 56 |
| 29 | 8     | 56 | 21    | 59 | 45    | 58 | 85    | 35 | 132   | 4  | 178   | 28 |
| 30 | 9     | 17 | 22    | 33 | 47    | 3  | 87    | 5  | 133   | 37 | 180   | 0  |



## AD LATITVDINEM 57. GRADVVM.

| 6     | u   | m     | T   | b     | u   | X     |     |    |     |    |     |    |
|-------|-----|-------|-----|-------|-----|-------|-----|----|-----|----|-----|----|
| temp. | /   | temp. | /   | temp. | /   | temp. | /   |    |     |    |     |    |
| 0     | 180 | 0     | 226 | 23    | 272 | 55    | 312 | 57 | 337 | 27 | 350 | 43 |
| 1     | 181 | 32    | 227 | 56    | 274 | 25    | 314 | 2  | 338 | 1  | 351 | 4  |
| 2     | 183 | 4     | 229 | 31    | 275 | 55    | 315 | 6  | 338 | 34 | 351 | 24 |
| 3     | 184 | 36    | 231 | 4     | 277 | 24    | 316 | 9  | 339 | 7  | 351 | 44 |
| 4     | 186 | 9     | 232 | 37    | 278 | 53    | 317 | 11 | 339 | 40 | 352 | 4  |
| 5     | 187 | 41    | 234 | 11    | 280 | 22    | 318 | 11 | 340 | 12 | 352 | 24 |
| 6     | 189 | 14    | 235 | 45    | 281 | 49    | 319 | 10 | 340 | 42 | 352 | 44 |
| 7     | 190 | 46    | 237 | 18    | 283 | 16    | 320 | 8  | 341 | 13 | 353 | 4  |
| 8     | 192 | 19    | 238 | 52    | 284 | 43    | 321 | 5  | 341 | 43 | 353 | 23 |
| 9     | 193 | 51    | 240 | 26    | 286 | 9     | 322 | 1  | 342 | 12 | 353 | 42 |
| 10    | 195 | 23    | 242 | 0     | 287 | 35    | 322 | 55 | 342 | 40 | 354 | 1  |
| 11    | 196 | 56    | 243 | 34    | 289 | 0     | 323 | 49 | 343 | 8  | 354 | 20 |
| 12    | 198 | 29    | 245 | 8     | 290 | 23    | 324 | 41 | 343 | 36 | 354 | 39 |
| 13    | 200 | 1     | 246 | 42    | 291 | 47    | 325 | 31 | 344 | 3  | 354 | 57 |
| 14    | 201 | 34    | 248 | 15    | 293 | 9     | 326 | 21 | 344 | 30 | 355 | 16 |
| 15    | 203 | 6     | 249 | 49    | 294 | 30    | 327 | 10 | 344 | 56 | 355 | 34 |
| 16    | 204 | 39    | 251 | 22    | 295 | 51    | 327 | 58 | 345 | 22 | 355 | 52 |
| 17    | 206 | 12    | 252 | 56    | 297 | 11    | 328 | 45 | 345 | 47 | 356 | 11 |
| 18    | 207 | 44    | 254 | 30    | 298 | 30    | 329 | 30 | 346 | 12 | 356 | 29 |
| 19    | 209 | 17    | 256 | 3     | 299 | 49    | 330 | 15 | 346 | 36 | 356 | 46 |
| 20    | 210 | 50    | 257 | 35    | 301 | 6     | 330 | 59 | 347 | 0  | 357 | 4  |
| 21    | 212 | 23    | 259 | 9     | 302 | 22    | 331 | 41 | 347 | 24 | 357 | 22 |
| 22    | 213 | 56    | 260 | 42    | 303 | 37    | 332 | 23 | 347 | 47 | 357 | 40 |
| 23    | 215 | 29    | 262 | 14    | 304 | 50    | 333 | 4  | 348 | 10 | 357 | 57 |
| 24    | 217 | 3     | 263 | 46    | 306 | 3     | 333 | 44 | 348 | 32 | 358 | 15 |
| 25    | 218 | 36    | 265 | 19    | 307 | 15    | 334 | 24 | 348 | 55 | 358 | 32 |
| 26    | 220 | 9     | 266 | 51    | 308 | 26    | 335 | 2  | 349 | 17 | 358 | 50 |
| 27    | 221 | 42    | 268 | 22    | 309 | 35    | 335 | 39 | 349 | 39 | 359 | 7  |
| 28    | 223 | 16    | 269 | 53    | 310 | 44    | 336 | 16 | 350 | 1  | 359 | 25 |
| 29    | 224 | 50    | 271 | 24    | 311 | 51    | 336 | 52 | 350 | 22 | 359 | 42 |
| 30    | 226 | 23    | 272 | 55    | 312 | 57    | 337 | 27 | 350 | 43 | 360 | 0  |



# TABVLA ASCENSIONVM OBLIQVARVM

| ̄  | V     |    | ♄     |    | ♂     |    | ♂     |    | ♂     |    | ♂     |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |
| 0  | 0     | 0  | 6     | 52 | 17    | 20 | 39    | 58 | 81    | 52 | 131   | 12 |
| 1  | 0     | 13 | 7     | 8  | 17    | 49 | 41    | 4  | 83    | 28 | 132   | 50 |
| 2  | 0     | 26 | 7     | 24 | 18    | 19 | 42    | 12 | 85    | 5  | 134   | 29 |
| 3  | 0     | 38 | 7     | 40 | 18    | 51 | 43    | 21 | 86    | 42 | 136   | 7  |
| 4  | 0     | 51 | 7     | 57 | 19    | 23 | 44    | 32 | 88    | 19 | 137   | 46 |
| 5  | 1     | 4  | 8     | 13 | 19    | 55 | 45    | 44 | 89    | 57 | 139   | 25 |
| 6  | 1     | 17 | 8     | 30 | 20    | 29 | 46    | 57 | 91    | 35 | 141   | 3  |
| 7  | 1     | 30 | 8     | 48 | 21    | 4  | 48    | 12 | 93    | 13 | 142   | 41 |
| 8  | 1     | 43 | 9     | 5  | 21    | 40 | 49    | 29 | 94    | 51 | 144   | 20 |
| 9  | 1     | 56 | 9     | 23 | 22    | 16 | 50    | 46 | 96    | 30 | 145   | 57 |
| 10 | 2     | 9  | 9     | 41 | 22    | 53 | 52    | 5  | 98    | 9  | 147   | 35 |
| 11 | 2     | 22 | 9     | 59 | 23    | 32 | 53    | 25 | 99    | 48 | 149   | 13 |
| 12 | 2     | 35 | 10    | 18 | 24    | 12 | 54    | 47 | 101   | 27 | 150   | 51 |
| 13 | 2     | 49 | 10    | 38 | 24    | 53 | 56    | 10 | 103   | 6  | 152   | 29 |
| 14 | 3     | 2  | 10    | 57 | 25    | 36 | 57    | 34 | 104   | 45 | 154   | 6  |
| 15 | 3     | 16 | 11    | 17 | 26    | 20 | 58    | 59 | 106   | 24 | 155   | 44 |
| 16 | 3     | 29 | 11    | 38 | 27    | 4  | 60    | 25 | 108   | 3  | 157   | 21 |
| 17 | 3     | 43 | 11    | 59 | 27    | 50 | 61    | 52 | 109   | 43 | 158   | 58 |
| 18 | 3     | 57 | 12    | 20 | 28    | 37 | 63    | 20 | 111   | 22 | 160   | 36 |
| 19 | 4     | 11 | 12    | 42 | 29    | 25 | 64    | 48 | 113   | 2  | 162   | 13 |
| 20 | 4     | 25 | 13    | 4  | 30    | 16 | 66    | 18 | 114   | 41 | 163   | 50 |
| 21 | 4     | 39 | 13    | 27 | 31    | 7  | 67    | 49 | 116   | 21 | 165   | 27 |
| 22 | 4     | 53 | 13    | 50 | 32    | 0  | 69    | 20 | 118   | 0  | 167   | 5  |
| 23 | 5     | 7  | 14    | 15 | 32    | 55 | 70    | 52 | 119   | 39 | 168   | 42 |
| 24 | 5     | 21 | 14    | 39 | 33    | 51 | 72    | 24 | 121   | 18 | 170   | 19 |
| 25 | 5     | 36 | 15    | 4  | 34    | 48 | 73    | 56 | 122   | 57 | 171   | 55 |
| 26 | 5     | 51 | 15    | 30 | 35    | 47 | 75    | 31 | 124   | 37 | 173   | 32 |
| 27 | 6     | 5  | 15    | 56 | 36    | 48 | 77    | 6  | 126   | 16 | 175   | 9  |
| 28 | 6     | 21 | 16    | 24 | 37    | 50 | 78    | 41 | 127   | 54 | 176   | 46 |
| 29 | 6     | 36 | 16    | 52 | 38    | 53 | 80    | 16 | 129   | 33 | 178   | 23 |
| 30 | 6     | 52 | 17    | 20 | 39    | 58 | 81    | 52 | 131   | 12 | 180   | 0  |



## AD LATITVDINEM 60. GRADVVM.

| 6  | p     | m  | +     | b  | ≡     | X  |       |    |       |    |       |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. |    | temp. |    | temp. |    | temp. |    | temp. |    | temp. |    |
| 0  | 180   | 0  | 228   | 48 | 278   | 8  | 320   | 2  | 342   | 40 | 353   | 8  |
| 1  | 181   | 37 | 230   | 27 | 279   | 44 | 321   | 7  | 343   | 8  | 353   | 24 |
| 2  | 183   | 14 | 232   | 6  | 281   | 19 | 322   | 10 | 343   | 36 | 353   | 39 |
| 3  | 184   | 51 | 233   | 44 | 282   | 54 | 323   | 12 | 344   | 4  | 353   | 55 |
| 4  | 186   | 28 | 235   | 23 | 284   | 29 | 324   | 13 | 344   | 30 | 354   | 9  |
| 5  | 188   | 5  | 237   | 3  | 286   | 4  | 325   | 12 | 344   | 56 | 354   | 24 |
| 6  | 189   | 41 | 238   | 42 | 287   | 36 | 326   | 9  | 345   | 21 | 354   | 39 |
| 7  | 191   | 18 | 240   | 21 | 289   | 8  | 327   | 5  | 345   | 45 | 354   | 53 |
| 8  | 192   | 55 | 242   | 0  | 290   | 40 | 328   | 0  | 346   | 10 | 355   | 7  |
| 9  | 194   | 33 | 243   | 39 | 292   | 11 | 328   | 53 | 346   | 33 | 355   | 21 |
| 10 | 196   | 10 | 245   | 19 | 293   | 42 | 329   | 44 | 346   | 56 | 355   | 35 |
| 11 | 197   | 47 | 246   | 58 | 295   | 12 | 330   | 35 | 347   | 18 | 355   | 49 |
| 12 | 199   | 24 | 248   | 38 | 296   | 40 | 331   | 23 | 347   | 40 | 356   | 3  |
| 13 | 201   | 2  | 250   | 17 | 298   | 8  | 332   | 10 | 348   | 1  | 356   | 17 |
| 14 | 202   | 39 | 251   | 57 | 299   | 35 | 332   | 56 | 348   | 22 | 356   | 31 |
| 15 | 204   | 16 | 253   | 36 | 301   | 1  | 333   | 40 | 348   | 33 | 356   | 44 |
| 16 | 205   | 54 | 255   | 15 | 302   | 26 | 334   | 24 | 349   | 3  | 356   | 58 |
| 17 | 207   | 31 | 256   | 54 | 303   | 50 | 335   | 7  | 349   | 22 | 357   | 11 |
| 18 | 209   | 9  | 258   | 33 | 305   | 13 | 335   | 48 | 349   | 42 | 357   | 25 |
| 19 | 210   | 47 | 260   | 12 | 306   | 35 | 336   | 28 | 350   | 1  | 357   | 38 |
| 20 | 212   | 25 | 261   | 51 | 307   | 55 | 337   | 7  | 350   | 19 | 357   | 51 |
| 21 | 214   | 3  | 263   | 30 | 309   | 14 | 337   | 44 | 350   | 37 | 358   | 4  |
| 22 | 215   | 40 | 265   | 9  | 310   | 31 | 338   | 20 | 350   | 55 | 358   | 17 |
| 23 | 217   | 19 | 266   | 47 | 311   | 48 | 338   | 56 | 351   | 12 | 358   | 30 |
| 24 | 218   | 47 | 268   | 25 | 313   | 3  | 339   | 31 | 351   | 30 | 358   | 43 |
| 25 | 220   | 35 | 270   | 3  | 314   | 16 | 340   | 5  | 351   | 47 | 358   | 56 |
| 26 | 222   | 14 | 271   | 41 | 315   | 28 | 340   | 37 | 352   | 3  | 359   | 9  |
| 27 | 223   | 53 | 273   | 18 | 316   | 39 | 341   | 9  | 352   | 20 | 359   | 22 |
| 28 | 225   | 31 | 274   | 55 | 317   | 48 | 341   | 41 | 352   | 36 | 359   | 34 |
| 29 | 227   | 10 | 276   | 32 | 318   | 56 | 342   | 11 | 352   | 52 | 359   | 47 |
| 30 | 228   | 48 | 278   | 8  | 320   | 2  | 342   | 40 | 353   | 8  | 360   | 0  |



# TABVLA ASCENSIONVM OBLIQVARVM

| ♄  | V     |    | ♅     |    | ♆     |    | ♇     |    | ♈     |    | ♉     |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |
| 0  | 0     | 0  | 3     | 54 | 10    | 28 | 29    | 42 | 75    | 0  | 128   | 14 |
| 1  | 0     | 7  | 4     | 3  | 10    | 48 | 30    | 49 | 76    | 46 | 129   | 59 |
| 2  | 0     | 14 | 4     | 13 | 11    | 10 | 31    | 57 | 78    | 32 | 131   | 45 |
| 3  | 0     | 21 | 4     | 22 | 11    | 31 | 33    | 8  | 80    | 18 | 133   | 29 |
| 4  | 0     | 29 | 4     | 32 | 11    | 53 | 34    | 21 | 82    | 4  | 135   | 14 |
| 5  | 0     | 36 | 4     | 42 | 12    | 16 | 35    | 36 | 83    | 51 | 136   | 59 |
| 6  | 0     | 43 | 4     | 52 | 12    | 40 | 36    | 53 | 85    | 37 | 138   | 43 |
| 7  | 0     | 51 | 5     | 3  | 13    | 6  | 38    | 12 | 87    | 24 | 140   | 28 |
| 8  | 0     | 58 | 5     | 13 | 13    | 33 | 39    | 33 | 89    | 11 | 142   | 12 |
| 9  | 1     | 6  | 5     | 24 | 14    | 0  | 40    | 55 | 90    | 58 | 143   | 56 |
| 10 | 1     | 13 | 5     | 34 | 14    | 28 | 42    | 20 | 92    | 45 | 145   | 40 |
| 11 | 1     | 20 | 5     | 46 | 14    | 57 | 43    | 47 | 94    | 32 | 147   | 24 |
| 12 | 1     | 28 | 5     | 57 | 15    | 29 | 45    | 16 | 96    | 19 | 149   | 7  |
| 13 | 1     | 35 | 6     | 9  | 16    | 2  | 46    | 46 | 98    | 7  | 150   | 51 |
| 14 | 1     | 43 | 6     | 21 | 16    | 37 | 48    | 19 | 99    | 53 | 152   | 35 |
| 15 | 1     | 51 | 6     | 33 | 17    | 13 | 49    | 53 | 101   | 40 | 154   | 19 |
| 16 | 1     | 58 | 6     | 46 | 17    | 49 | 51    | 26 | 103   | 27 | 156   | 2  |
| 17 | 2     | 6  | 6     | 59 | 18    | 17 | 53    | 0  | 105   | 15 | 157   | 45 |
| 18 | 2     | 13 | 7     | 13 | 19    | 6  | 54    | 36 | 107   | 1  | 159   | 28 |
| 19 | 2     | 21 | 7     | 26 | 19    | 47 | 56    | 13 | 108   | 48 | 161   | 11 |
| 20 | 2     | 29 | 7     | 41 | 20    | 30 | 57    | 52 | 110   | 34 | 162   | 54 |
| 21 | 2     | 37 | 7     | 55 | 21    | 16 | 59    | 33 | 112   | 21 | 164   | 37 |
| 22 | 2     | 45 | 8     | 10 | 22    | 4  | 61    | 14 | 114   | 7  | 166   | 19 |
| 23 | 2     | 54 | 8     | 26 | 22    | 54 | 62    | 56 | 115   | 54 | 168   | 2  |
| 24 | 3     | 2  | 8     | 41 | 23    | 46 | 64    | 37 | 117   | 40 | 169   | 45 |
| 25 | 3     | 10 | 8     | 58 | 24    | 40 | 66    | 19 | 119   | 26 | 171   | 27 |
| 26 | 3     | 19 | 9     | 14 | 25    | 36 | 68    | 2  | 121   | 12 | 173   | 10 |
| 27 | 3     | 27 | 9     | 32 | 26    | 34 | 69    | 46 | 122   | 58 | 174   | 52 |
| 28 | 3     | 36 | 9     | 51 | 27    | 35 | 71    | 31 | 124   | 42 | 176   | 35 |
| 29 | 3     | 45 | 10    | 9  | 28    | 37 | 73    | 15 | 126   | 29 | 178   | 17 |
| 30 | 3     | 54 | 10    | 28 | 29    | 42 | 75    | 0  | 128   | 14 | 180   | 0  |



## AD LATITVDINEM 63. GRADVVVM.

| 5     | 2     | m     | T     | 7     | 8     | 9     | X     |    |     |    |     |    |
|-------|-------|-------|-------|-------|-------|-------|-------|----|-----|----|-----|----|
| temp. | temp. | temp. | temp. | temp. | temp. | temp. | temp. |    |     |    |     |    |
| 0     | 180   | 0     | 231   | 46    | 285   | 0     | 330   | 18 | 349 | 32 | 356 | 6  |
| 1     | 181   | 43    | 233   | 31    | 286   | 45    | 331   | 23 | 349 | 51 | 356 | 15 |
| 2     | 183   | 25    | 235   | 18    | 288   | 29    | 332   | 25 | 350 | 9  | 356 | 24 |
| 3     | 185   | 8     | 237   | 2     | 290   | 14    | 333   | 26 | 350 | 28 | 356 | 33 |
| 4     | 186   | 50    | 238   | 48    | 291   | 58    | 334   | 24 | 350 | 46 | 356 | 41 |
| 5     | 188   | 33    | 240   | 34    | 293   | 41    | 335   | 20 | 351 | 2  | 356 | 50 |
| 6     | 190   | 15    | 242   | 20    | 295   | 23    | 336   | 14 | 351 | 19 | 356 | 58 |
| 7     | 191   | 58    | 244   | 6     | 297   | 4     | 337   | 6  | 351 | 34 | 357 | 6  |
| 8     | 193   | 41    | 245   | 53    | 298   | 46    | 337   | 56 | 351 | 50 | 357 | 15 |
| 9     | 195   | 23    | 247   | 39    | 300   | 27    | 338   | 44 | 352 | 5  | 357 | 23 |
| 10    | 197   | 6     | 249   | 26    | 302   | 8     | 339   | 30 | 352 | 19 | 357 | 31 |
| 11    | 198   | 49    | 251   | 12    | 303   | 47    | 340   | 13 | 352 | 34 | 357 | 39 |
| 12    | 200   | 32    | 252   | 59    | 305   | 24    | 340   | 54 | 352 | 47 | 357 | 47 |
| 13    | 202   | 15    | 254   | 45    | 307   | 0     | 341   | 43 | 353 | 1  | 357 | 54 |
| 14    | 203   | 58    | 256   | 33    | 308   | 34    | 342   | 11 | 353 | 14 | 358 | 2  |
| 15    | 205   | 41    | 258   | 20    | 310   | 7     | 342   | 47 | 353 | 27 | 358 | 9  |
| 16    | 207   | 25    | 260   | 7     | 311   | 41    | 343   | 23 | 353 | 39 | 358 | 17 |
| 17    | 209   | 9     | 261   | 53    | 313   | 14    | 343   | 58 | 353 | 51 | 358 | 25 |
| 18    | 210   | 53    | 263   | 41    | 314   | 44    | 344   | 31 | 354 | 3  | 358 | 32 |
| 19    | 212   | 36    | 265   | 28    | 316   | 13    | 345   | 3  | 354 | 14 | 358 | 40 |
| 20    | 214   | 20    | 267   | 15    | 317   | 40    | 345   | 32 | 354 | 26 | 358 | 47 |
| 21    | 216   | 4     | 269   | 2     | 319   | 5     | 346   | 0  | 354 | 36 | 358 | 54 |
| 22    | 217   | 48    | 270   | 49    | 320   | 27    | 346   | 27 | 354 | 47 | 359 | 2  |
| 23    | 219   | 32    | 272   | 36    | 321   | 48    | 346   | 54 | 354 | 57 | 359 | 9  |
| 24    | 221   | 17    | 274   | 23    | 323   | 7     | 347   | 20 | 355 | 8  | 359 | 17 |
| 25    | 223   | 1     | 276   | 9     | 324   | 24    | 347   | 44 | 355 | 18 | 359 | 24 |
| 26    | 224   | 46    | 277   | 56    | 325   | 39    | 348   | 7  | 355 | 28 | 359 | 31 |
| 27    | 226   | 31    | 279   | 42    | 326   | 52    | 348   | 29 | 355 | 38 | 359 | 39 |
| 28    | 228   | 15    | 281   | 28    | 328   | 3     | 348   | 50 | 355 | 47 | 359 | 46 |
| 29    | 230   | 1     | 283   | 14    | 329   | 11    | 349   | 12 | 355 | 57 | 359 | 53 |
| 30    | 231   | 46    | 285   | 0     | 330   | 18    | 349   | 32 | 356 | 6  | 360 | 0  |



# TABVLA ASCENSIONVM OBLIQVARVM

| 6  | V     |    | 8     |    | II    |    | 6     |    | 9     |    | III   |    |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|
|    | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  | temp. | /  |
| 0  | 0     | 0  | 0     | 12 | 0     | 35 | 6     | 25 | 65    | 7  | 124   | 31 |
| 1  | 0     | 0  | 0     | 12 | 0     | 36 | 7     | 36 | 67    | 10 | 126   | 25 |
| 2  | 0     | 1  | 0     | 13 | 0     | 37 | 8     | 58 | 69    | 13 | 128   | 19 |
| 3  | 0     | 1  | 0     | 13 | 0     | 38 | 10    | 29 | 71    | 15 | 130   | 13 |
| 4  | 0     | 1  | 0     | 14 | 0     | 40 | 12    | 7  | 73    | 18 | 132   | 6  |
| 5  | 0     | 2  | 0     | 14 | 0     | 42 | 13    | 53 | 75    | 21 | 133   | 58 |
| 6  | 0     | 2  | 0     | 15 | 0     | 43 | 15    | 43 | 77    | 23 | 135   | 50 |
| 7  | 0     | 2  | 0     | 15 | 0     | 45 | 17    | 37 | 79    | 25 | 137   | 43 |
| 8  | 0     | 2  | 0     | 16 | 0     | 47 | 19    | 33 | 81    | 26 | 139   | 35 |
| 9  | 0     | 2  | 0     | 16 | 0     | 50 | 21    | 32 | 83    | 27 | 141   | 27 |
| 10 | 0     | 3  | 0     | 17 | 0     | 53 | 23    | 33 | 85    | 28 | 143   | 18 |
| 11 | 0     | 3  | 0     | 17 | 0     | 56 | 25    | 35 | 87    | 28 | 145   | 9  |
| 12 | 0     | 3  | 0     | 18 | 0     | 59 | 27    | 38 | 89    | 28 | 147   | 0  |
| 13 | 0     | 3  | 0     | 18 | 1     | 2  | 29    | 40 | 91    | 27 | 148   | 51 |
| 14 | 0     | 4  | 0     | 19 | 1     | 5  | 31    | 44 | 93    | 27 | 150   | 42 |
| 15 | 0     | 4  | 0     | 19 | 1     | 9  | 33    | 48 | 95    | 26 | 152   | 32 |
| 16 | 0     | 5  | 0     | 20 | 1     | 14 | 35    | 54 | 97    | 25 | 154   | 23 |
| 17 | 0     | 6  | 0     | 21 | 1     | 20 | 38    | 0  | 99    | 23 | 156   | 13 |
| 18 | 0     | 6  | 0     | 22 | 1     | 27 | 40    | 6  | 101   | 21 | 158   | 3  |
| 19 | 0     | 7  | 0     | 23 | 1     | 35 | 42    | 12 | 103   | 19 | 159   | 53 |
| 20 | 0     | 7  | 0     | 23 | 1     | 44 | 44    | 18 | 105   | 17 | 161   | 43 |
| 21 | 0     | 8  | 0     | 24 | 1     | 54 | 46    | 23 | 107   | 13 | 163   | 33 |
| 22 | 0     | 8  | 0     | 25 | 2     | 5  | 48    | 28 | 109   | 10 | 165   | 23 |
| 23 | 0     | 8  | 0     | 26 | 2     | 19 | 50    | 33 | 111   | 6  | 167   | 14 |
| 24 | 0     | 9  | 0     | 27 | 2     | 36 | 52    | 38 | 113   | 3  | 169   | 3  |
| 25 | 0     | 9  | 0     | 28 | 2     | 57 | 54    | 44 | 114   | 58 | 170   | 53 |
| 26 | 0     | 10 | 0     | 29 | 3     | 23 | 56    | 49 | 116   | 53 | 172   | 42 |
| 27 | 0     | 10 | 0     | 30 | 3     | 55 | 58    | 54 | 118   | 48 | 174   | 32 |
| 28 | 0     | 11 | 0     | 31 | 4     | 35 | 60    | 58 | 120   | 42 | 176   | 21 |
| 29 | 0     | 11 | 0     | 33 | 5     | 25 | 63    | 2  | 122   | 37 | 178   | 11 |
| 30 | 0     | 12 | 0     | 35 | 6     | 25 | 65    | 7  | 124   | 31 | 180   | 0  |



# AD LATITVDINEM 66. GRADVVM. 187

| g     | h   | m     | p   | b     | z   | x     |     |       |     |       |     |    |
|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|----|
| temp. | /   | temp. | /   | temp. | /   | temp. | /   | temp. | /   | temp. | /   |    |
| 0     | 180 | 0     | 235 | 29    | 294 | 53    | 353 | 35    | 359 | 25    | 359 | 48 |
| 1     | 181 | 49    | 237 | 23    | 296 | 58    | 354 | 35    | 359 | 27    | 359 | 49 |
| 2     | 183 | 39    | 239 | 18    | 299 | 2     | 355 | 25    | 359 | 29    | 359 | 49 |
| 3     | 185 | 28    | 241 | 12    | 301 | 6     | 356 | 5     | 359 | 30    | 359 | 50 |
| 4     | 187 | 18    | 243 | 7     | 303 | 11    | 356 | 37    | 359 | 31    | 359 | 50 |
| 5     | 189 | 7     | 245 | 2     | 305 | 16    | 357 | 3     | 359 | 32    | 359 | 51 |
| 6     | 190 | 57    | 246 | 58    | 307 | 22    | 357 | 24    | 359 | 33    | 356 | 51 |
| 7     | 192 | 46    | 248 | 54    | 309 | 27    | 357 | 41    | 359 | 34    | 359 | 52 |
| 8     | 194 | 37    | 250 | 50    | 311 | 32    | 357 | 55    | 359 | 35    | 359 | 52 |
| 9     | 196 | 27    | 252 | 47    | 313 | 37    | 358 | 6     | 359 | 36    | 359 | 52 |
| 10    | 198 | 17    | 254 | 43    | 315 | 42    | 358 | 16    | 359 | 37    | 359 | 53 |
| 11    | 200 | 7     | 256 | 41    | 317 | 48    | 358 | 25    | 359 | 37    | 359 | 53 |
| 12    | 201 | 57    | 258 | 39    | 319 | 54    | 358 | 33    | 359 | 38    | 359 | 54 |
| 13    | 203 | 47    | 260 | 37    | 322 | 0     | 358 | 40    | 359 | 39    | 359 | 54 |
| 14    | 205 | 37    | 262 | 35    | 324 | 6     | 358 | 46    | 359 | 40    | 359 | 55 |
| 15    | 207 | 28    | 264 | 34    | 326 | 12    | 358 | 51    | 359 | 41    | 359 | 56 |
| 16    | 209 | 18    | 266 | 33    | 328 | 16    | 358 | 55    | 359 | 41    | 359 | 56 |
| 17    | 211 | 9     | 268 | 33    | 330 | 20    | 358 | 58    | 359 | 42    | 359 | 57 |
| 18    | 213 | 0     | 270 | 32    | 332 | 22    | 359 | 1     | 359 | 42    | 359 | 57 |
| 19    | 214 | 51    | 272 | 32    | 334 | 25    | 359 | 4     | 359 | 43    | 359 | 57 |
| 20    | 216 | 42    | 274 | 32    | 336 | 27    | 359 | 7     | 359 | 43    | 359 | 57 |
| 21    | 218 | 33    | 276 | 33    | 338 | 28    | 359 | 10    | 359 | 44    | 359 | 58 |
| 22    | 220 | 25    | 278 | 34    | 340 | 27    | 359 | 13    | 359 | 44    | 359 | 58 |
| 23    | 222 | 17    | 280 | 35    | 342 | 23    | 359 | 15    | 359 | 45    | 359 | 58 |
| 24    | 224 | 10    | 282 | 37    | 344 | 17    | 359 | 17    | 359 | 45    | 359 | 58 |
| 25    | 226 | 2     | 284 | 39    | 346 | 7     | 359 | 18    | 359 | 46    | 359 | 59 |
| 26    | 227 | 54    | 286 | 42    | 347 | 53    | 359 | 20    | 359 | 46    | 359 | 59 |
| 27    | 229 | 47    | 288 | 45    | 349 | 31    | 359 | 22    | 359 | 47    | 359 | 59 |
| 28    | 231 | 51    | 290 | 47    | 351 | 2     | 359 | 23    | 359 | 47    | 359 | 59 |
| 29    | 233 | 25    | 292 | 50    | 352 | 24    | 359 | 24    | 359 | 48    | 359 | 59 |
| 30    | 235 | 29    | 294 | 53    | 353 | 35    | 359 | 25    | 359 | 48    | 360 | 0  |



TABVLA Domorum secundum Campanum & Garulani.

| Latitudo | Decimae interstitium |      | Vndecimae Numerus polaris |      | Vndecimae interstitium |      | Duodecimae Numerus polaris |      | Latitudo | Decimae interstitium |      | Vndecimae Numerus polaris |      | Vndecimae interstitium |      | Duodecimae Numerus polaris |      |
|----------|----------------------|------|---------------------------|------|------------------------|------|----------------------------|------|----------|----------------------|------|---------------------------|------|------------------------|------|----------------------------|------|
|          | g                    | scr. | g                         | scr. | g                      | scr. | g                          | scr. |          | g                    | scr. | g                         | scr. | g                      | scr. | g                          | scr. |
| 0        | 30                   | 0    | 0                         | 0    | 30                     | 0    | 0                          | 0    | 26       | 27                   | 25   | 12                        | 40   | 29                     | 53   | 22                         | 18   |
| 1        | 30                   | 0    | 0                         | 30   | 30                     | 0    | 0                          | 52   | 27       | 27                   | 13   | 13                        | 7    | 29                     | 51   | 23                         | 9    |
| 2        | 29                   | 59   | 1                         | 0    | 30                     | 0    | 1                          | 44   | 28       | 27                   | 0    | 13                        | 35   | 29                     | 49   | 23                         | 59   |
| 3        | 29                   | 58   | 1                         | 30   | 30                     | 0    | 2                          | 36   | 29       | 26                   | 47   | 14                        | 2    | 29                     | 47   | 24                         | 49   |
| 4        | 29                   | 56   | 2                         | 0    | 30                     | 0    | 3                          | 28   | 30       | 26                   | 33   | 14                        | 29   | 29                     | 45   | 25                         | 39   |
| 5        | 29                   | 54   | 2                         | 30   | 30                     | 0    | 4                          | 20   | 31       | 26                   | 19   | 14                        | 55   | 29                     | 43   | 26                         | 29   |
| 6        | 29                   | 51   | 3                         | 0    | 30                     | 0    | 5                          | 12   | 32       | 26                   | 5    | 15                        | 22   | 29                     | 40   | 27                         | 19   |
| 7        | 29                   | 48   | 3                         | 30   | 30                     | 0    | 6                          | 4    | 33       | 25                   | 50   | 15                        | 48   | 29                     | 37   | 28                         | 9    |
| 8        | 29                   | 45   | 3                         | 59   | 30                     | 0    | 6                          | 55   | 34       | 25                   | 35   | 16                        | 14   | 29                     | 33   | 28                         | 58   |
| 9        | 29                   | 41   | 4                         | 29   | 30                     | 0    | 7                          | 47   | 35       | 25                   | 19   | 16                        | 40   | 29                     | 30   | 29                         | 47   |
| 10       | 29                   | 37   | 4                         | 59   | 30                     | 0    | 8                          | 39   | 36       | 25                   | 3    | 17                        | 5    | 29                     | 26   | 30                         | 36   |
| 11       | 29                   | 32   | 5                         | 28   | 30                     | 0    | 9                          | 31   | 37       | 24                   | 46   | 17                        | 31   | 29                     | 22   | 31                         | 25   |
| 12       | 29                   | 27   | 5                         | 58   | 30                     | 0    | 10                         | 22   | 38       | 24                   | 29   | 17                        | 56   | 29                     | 17   | 32                         | 14   |
| 13       | 29                   | 21   | 6                         | 28   | 30                     | 0    | 11                         | 14   | 39       | 24                   | 11   | 18                        | 20   | 29                     | 12   | 33                         | 2    |
| 14       | 29                   | 15   | 6                         | 57   | 30                     | 0    | 12                         | 6    | 40       | 23                   | 53   | 18                        | 45   | 29                     | 6    | 33                         | 50   |
| 15       | 29                   | 9    | 7                         | 26   | 29                     | 59   | 12                         | 58   | 41       | 23                   | 34   | 19                        | 9    | 29                     | 0    | 34                         | 38   |
| 16       | 29                   | 2    | 7                         | 55   | 29                     | 59   | 13                         | 49   | 42       | 23                   | 14   | 19                        | 33   | 28                     | 54   | 35                         | 25   |
| 17       | 28                   | 55   | 8                         | 24   | 29                     | 59   | 14                         | 41   | 43       | 22                   | 54   | 19                        | 56   | 28                     | 47   | 36                         | 12   |
| 18       | 28                   | 47   | 8                         | 53   | 29                     | 58   | 15                         | 32   | 44       | 22                   | 34   | 20                        | 19   | 28                     | 39   | 36                         | 59   |
| 19       | 28                   | 38   | 9                         | 22   | 29                     | 58   | 16                         | 23   | 45       | 22                   | 13   | 20                        | 42   | 28                     | 32   | 37                         | 46   |
| 20       | 28                   | 29   | 9                         | 51   | 29                     | 57   | 17                         | 14   | 46       | 21                   | 51   | 21                        | 5    | 28                     | 24   | 38                         | 32   |
| 21       | 28                   | 19   | 10                        | 19   | 29                     | 57   | 18                         | 5    | 47       | 21                   | 29   | 21                        | 27   | 28                     | 15   | 39                         | 18   |
| 22       | 28                   | 9    | 10                        | 48   | 29                     | 56   | 18                         | 56   | 48       | 21                   | 7    | 21                        | 49   | 28                     | 5    | 40                         | 4    |
| 23       | 27                   | 59   | 11                        | 16   | 29                     | 56   | 19                         | 47   | 49       | 20                   | 44   | 22                        | 10   | 27                     | 55   | 40                         | 49   |
| 24       | 27                   | 48   | 11                        | 44   | 29                     | 55   | 20                         | 37   | 50       | 20                   | 21   | 22                        | 31   | 27                     | 43   | 41                         | 34   |
| 25       | 27                   | 37   | 12                        | 12   | 29                     | 64   | 21                         | 28   | 51       | 19                   | 58   | 22                        | 52   | 27                     | 30   | 42                         | 18   |
| Regionis |                      |      | Tertiae                   |      | Secundae               |      | Secundae                   |      | Regionis |                      |      | Tertiae                   |      | Secundae               |      | Secundae                   |      |
|          |                      |      |                           |      |                        |      |                            |      |          |                      |      |                           |      |                        |      |                            |      |



# RELIQVVM ANTECEDENTIS TABVLAE<sup>188</sup>

| Latitudo | Decimæ interstium |      | Vndecimæ numerus polaris |      | Vndecimæ interstium |      | Duodecimæ numerus polaris |      |  |  |  |
|----------|-------------------|------|--------------------------|------|---------------------|------|---------------------------|------|--|--|--|
|          | g                 | scr. | g                        | scr. | g                   | scr. | g                         | scr. |  |  |  |
| 52       | 19                | 34   | 23                       | 12   | 27                  | 16   | 43                        | 2    |  |  |  |
| 53       | 19                | 10   | 23                       | 32   | 27                  | 1    | 43                        | 45   |  |  |  |
| 54       | 18                | 45   | 23                       | 52   | 26                  | 46   | 44                        | 28   |  |  |  |
| 55       | 18                | 20   | 24                       | 11   | 26                  | 29   | 45                        | 11   |  |  |  |
| 56       | 17                | 54   | 24                       | 29   | 26                  | 11   | 45                        | 53   |  |  |  |
| 57       | 17                | 28   | 24                       | 47   | 25                  | 52   | 46                        | 35   |  |  |  |
| 58       | 17                | 1    | 25                       | 5    | 25                  | 32   | 47                        | 16   |  |  |  |
| 59       | 16                | 33   | 25                       | 23   | 25                  | 11   | 47                        | 56   |  |  |  |
| 60       | 16                | 5    | 25                       | 40   | 24                  | 48   | 48                        | 36   |  |  |  |
| 61       | 15                | 38   | 25                       | 56   | 24                  | 23   | 49                        | 15   |  |  |  |
| 62       | 15                | 10   | 26                       | 12   | 23                  | 57   | 49                        | 53   |  |  |  |
| 63       | 14                | 41   | 26                       | 27   | 23                  | 30   | 50                        | 30   |  |  |  |
| 64       | 14                | 12   | 26                       | 42   | 23                  | 1    | 51                        | 7    |  |  |  |
| 65       | 13                | 43   | 26                       | 57   | 22                  | 30   | 51                        | 43   |  |  |  |
| 66       | 13                | 13   | 27                       | 11   | 21                  | 57   | 52                        | 18   |  |  |  |
| 67       | 12                | 43   | 27                       | 24   | 21                  | 22   | 52                        | 52   |  |  |  |
| 68       | 12                | 12   | 27                       | 37   | 20                  | 46   | 53                        | 25   |  |  |  |
| 69       | 11                | 41   | 27                       | 50   | 20                  | 8    | 53                        | 57   |  |  |  |
| 70       | 11                | 10   | 28                       | 2    | 19                  | 28   | 54                        | 28   |  |  |  |
| 71       | 10                | 39   | 28                       | 13   | 18                  | 46   | 54                        | 58   |  |  |  |
| 72       | 10                | 7    | 28                       | 24   | 18                  | 2    | 55                        | 27   |  |  |  |
| Regionis |                   |      | Tertiæ                   |      | Secundæ             |      | Secundæ                   |      |  |  |  |
|          |                   |      |                          |      |                     |      |                           |      |  |  |  |



# TABVLA DOMORVM RATIONALIS

| Latitu.<br>̄ | Vndecimæ<br>Tertiæ<br>Numerus |      | Duodecimæ<br>Secundæ<br>Polaris |      | Latitu.<br>̄ | Vndecimæ<br>Tertiæ<br>Numerus |      | Duodecimæ<br>Secundæ<br>Polaris |      |
|--------------|-------------------------------|------|---------------------------------|------|--------------|-------------------------------|------|---------------------------------|------|
|              | ̄                             | scr. | ̄                               | scr. |              | ̄                             | scr. | ̄                               | scr. |
| 1            | 0                             | 29   | 0                               | 51   | 27           | 14                            | 18   | 23                              | 48   |
| 2            | 0                             | 59   | 1                               | 43   | 28           | 14                            | 54   | 24                              | 43   |
| 3            | 1                             | 29   | 2                               | 35   | 29           | 15                            | 30   | 25                              | 38   |
| 4            | 1                             | 59   | 3                               | 27   | 30           | 16                            | 7    | 26                              | 33   |
| 5            | 2                             | 29   | 4                               | 19   | 31           | 16                            | 44   | 27                              | 29   |
| 6            | 3                             | 0    | 5                               | 11   | 32           | 17                            | 21   | 28                              | 25   |
| 7            | 3                             | 31   | 6                               | 4    | 33           | 17                            | 59   | 29                              | 21   |
| 8            | 4                             | 2    | 6                               | 57   | 34           | 18                            | 38   | 30                              | 17   |
| 9            | 4                             | 32   | 7                               | 49   | 35           | 19                            | 18   | 31                              | 14   |
| 10           | 5                             | 3    | 8                               | 41   | 36           | 19                            | 58   | 32                              | 11   |
| 11           | 5                             | 34   | 9                               | 33   | 37           | 20                            | 39   | 33                              | 8    |
| 12           | 6                             | 5    | 10                              | 26   | 38           | 21                            | 20   | 34                              | 5    |
| 13           | 6                             | 36   | 11                              | 18   | 39           | 22                            | 2    | 35                              | 2    |
| 14           | 7                             | 7    | 12                              | 11   | 40           | 22                            | 45   | 36                              | 0    |
| 15           | 7                             | 38   | 13                              | 4    | 41           | 23                            | 29   | 36                              | 58   |
| 16           | 8                             | 9    | 13                              | 57   | 42           | 24                            | 14   | 37                              | 52   |
| 17           | 8                             | 41   | 14                              | 50   | 43           | 25                            | 0    | 38                              | 56   |
| 18           | 9                             | 13   | 15                              | 43   | 44           | 25                            | 47   | 39                              | 55   |
| 19           | 9                             | 45   | 16                              | 36   | 45           | 26                            | 34   | 40                              | 54   |
| 20           | 10                            | 18   | 17                              | 30   | 46           | 27                            | 22   | 41                              | 53   |
| 21           | 10                            | 51   | 18                              | 23   | 47           | 28                            | 11   | 42                              | 53   |
| 22           | 11                            | 25   | 19                              | 17   | 48           | 29                            | 2    | 43                              | 53   |
| 23           | 11                            | 58   | 20                              | 11   | 49           | 29                            | 54   | 44                              | 54   |
| 24           | 12                            | 32   | 21                              | 5    | 50           | 30                            | 47   | 45                              | 55   |
| 25           | 13                            | 7    | 21                              | 59   | 51           | 31                            | 41   | 46                              | 56   |
| 26           | 13                            | 42   | 22                              | 53   | 52           | 32                            | 37   | 47                              | 57   |
| Regionis     | Nonæ<br>Quintæ                |      | Octauæ<br>Sextæ                 |      | Regionis     | Nonæ<br>Quintæ                |      | Octauæ<br>Sextæ                 |      |



## RELIQVVM PRAECEDENTIS CANONIS

| Latitu.  | Vndecimæ<br>Tertiæ<br>Numerus |      | Duodecimæ<br>Secundæ<br>Polaris |      |
|----------|-------------------------------|------|---------------------------------|------|
|          | g                             | scr. | g                               | scr. |
| 53       | 33                            | 34   | 48                              | 59   |
| 54       | 34                            | 32   | 50                              | 1    |
| 55       | 35                            | 32   | 51                              | 3    |
| 56       | 36                            | 33   | 52                              | 5    |
| 57       | 37                            | 35   | 53                              | 8    |
| 58       | 38                            | 39   | 54                              | 11   |
| 59       | 39                            | 45   | 55                              | 14   |
| 60       | 40                            | 53   | 56                              | 18   |
| 61       | 42                            | 3    | 57                              | 22   |
| 62       | 43                            | 14   | 58                              | 27   |
| 63       | 44                            | 27   | 59                              | 22   |
| 64       | 45                            | 42   | 60                              | 37   |
| 65       | 46                            | 59   | 61                              | 42   |
| 66       | 48                            | 18   | 62                              | 47   |
| 67       | 49                            | 39   | 63                              | 53   |
| 68       | 51                            | 3    | 64                              | 59   |
| 69       | 52                            | 29   | 66                              | 5    |
| 70       | 53                            | 57   | 67                              | 12   |
| 71       | 55                            | 27   | 68                              | 19   |
| 72       | 56                            | 58   | 69                              | 26   |
| Regionis | Nonæ<br>Quintæ                |      | Octauæ<br>Sextæ                 |      |







# SEQVVNTVR

CANONES POSITIONVM PAR

ticulares ad gradus latitudinis.

14. 17. 60. 63. 66.



TABVLA POSITIONVM AD 54.

| Elevatio | I   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|
| Gr.      | Gr. | Gr. | Gr. | Gr. | Gr. | Gr. | Gr. | Gr. |
| Decli    | 32  | 1   | 21  | 2   | 42  | 4   | 4   | 5   |
| na       | 31  | 1   | 20  | 2   | 39  | 3   | 59  | 5   |
| rio      | 30  | 1   | 19  | 2   | 36  | 3   | 55  | 5   |
| BO       | 29  | 1   | 17  | 2   | 34  | 3   | 51  | 5   |
| RE       | 28  | 1   | 16  | 2   | 31  | 3   | 47  | 5   |
| ALIS     | 27  | 1   | 15  | 2   | 28  | 3   | 43  | 4   |
| supra    | 26  | 1   | 13  | 2   | 26  | 3   | 39  | 4   |
| terram   | 25  | 1   | 12  | 2   | 23  | 3   | 35  | 4   |
| ET       | 24  | 1   | 11  | 2   | 20  | 3   | 31  | 4   |
| AVS      | 23  | 1   | 9   | 2   | 18  | 3   | 28  | 4   |
| TRA      | 22  | 1   | 8   | 2   | 16  | 3   | 24  | 4   |
| LIS      | 21  | 1   | 7   | 2   | 13  | 3   | 20  | 4   |
| sub      | 20  | 1   | 6   | 2   | 11  | 3   | 17  | 4   |
| ter      | 19  | 1   | 5   | 2   | 8   | 3   | 13  | 4   |
| ra       | 18  | 1   | 3   | 2   | 6   | 3   | 10  | 4   |
|          | 17  | 1   | 2   | 2   | 4   | 3   | 6   | 4   |
|          | 16  | 1   | 1   | 2   | 1   | 3   | 3   | 4   |
|          | 15  | 1   | 0   | 1   | 59  | 2   | 59  | 3   |
|          | 14  | 0   | 59  | 1   | 57  | 2   | 56  | 3   |
|          | 13  | 0   | 58  | 1   | 55  | 2   | 53  | 3   |
|          | 12  | 0   | 57  | 1   | 52  | 2   | 49  | 3   |
|          | 11  | 0   | 56  | 1   | 50  | 2   | 46  | 3   |
|          | 10  | 0   | 55  | 1   | 48  | 2   | 43  | 3   |
|          | 9   | 0   | 53  | 1   | 46  | 2   | 40  | 3   |
|          | 8   | 0   | 52  | 1   | 44  | 2   | 36  | 3   |
|          | 7   | 0   | 51  | 1   | 42  | 2   | 33  | 3   |
|          | 6   | 0   | 50  | 1   | 40  | 2   | 20  | 3   |
|          | 5   | 0   | 49  | 1   | 37  | 2   | 27  | 3   |
|          | 4   | 0   | 48  | 1   | 35  | 2   | 24  | 3   |
|          | 3   | 0   | 47  | 1   | 33  | 2   | 20  | 3   |
|          | 2   | 0   | 46  | 1   | 31  | 2   | 17  | 3   |
|          | 1   | 0   | 45  | 1   | 29  | 2   | 14  | 2   |
|          | 0   | 0   | 44  | 1   | 27  | 2   | 11  | 2   |



## GRADVS LATITVDINIS.

poli

| 9  |    | 10 |    | 11 |    | 12 |    | 13 |    | 14 |    | 15 |    | 16 |    | 17 |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 8  | 8  | /  | 8  | /  | 8  | /  | 8  | /  | 8  | /  | 8  | /  | 8  | /  | 8  | /  | 8  |    |
| 32 | 12 | 17 | 13 | 42 | 15 | 6  | 16 | 31 | 17 | 57 | 19 | 24 | 20 | 52 | 22 | 20 | 23 | 51 |
| 31 | 12 | 4  | 13 | 27 | 14 | 45 | 16 | 13 | 17 | 37 | 19 | 3  | 20 | 30 | 21 | 56 | 23 | 25 |
| 30 | 11 | 51 | 13 | 13 | 14 | 34 | 15 | 56 | 17 | 19 | 18 | 43 | 20 | 28 | 21 | 33 | 23 | 0  |
| 29 | 11 | 48 | 12 | 59 | 14 | 28 | 15 | 39 | 17 | 0  | 18 | 23 | 19 | 46 | 21 | 10 | 22 | 35 |
| 28 | 11 | 26 | 12 | 45 | 14 | 3  | 15 | 21 | 16 | 42 | 18 | 3  | 19 | 25 | 20 | 47 | 22 | 11 |
| 27 | 11 | 14 | 12 | 31 | 13 | 48 | 15 | 6  | 16 | 24 | 17 | 44 | 19 | 5  | 20 | 25 | 21 | 48 |
| 26 | 11 | 2  | 12 | 18 | 13 | 33 | 14 | 50 | 16 | 7  | 17 | 25 | 18 | 45 | 20 | 3  | 21 | 25 |
| 25 | 10 | 50 | 12 | 5  | 13 | 19 | 14 | 34 | 15 | 50 | 17 | 7  | 18 | 25 | 19 | 42 | 21 | 2  |
| 24 | 10 | 39 | 11 | 52 | 13 | 5  | 14 | 19 | 15 | 33 | 16 | 48 | 18 | 5  | 19 | 21 | 20 | 39 |
| 23 | 10 | 27 | 11 | 40 | 12 | 51 | 14 | 4  | 15 | 16 | 16 | 30 | 17 | 46 | 19 | 0  | 20 | 17 |
| 22 | 10 | 16 | 11 | 27 | 12 | 37 | 13 | 49 | 15 | 0  | 16 | 13 | 17 | 27 | 18 | 40 | 19 | 56 |
| 21 | 10 | 5  | 11 | 15 | 12 | 24 | 13 | 34 | 14 | 44 | 15 | 56 | 17 | 8  | 18 | 20 | 19 | 34 |
| 20 | 9  | 54 | 11 | 3  | 12 | 10 | 13 | 19 | 14 | 28 | 15 | 38 | 16 | 50 | 18 | 0  | 19 | 13 |
| 19 | 9  | 44 | 10 | 51 | 11 | 57 | 13 | 5  | 14 | 13 | 15 | 21 | 16 | 32 | 17 | 41 | 18 | 53 |
| 18 | 9  | 33 | 10 | 39 | 11 | 44 | 12 | 51 | 13 | 57 | 15 | 5  | 16 | 14 | 17 | 22 | 18 | 32 |
| 17 | 9  | 23 | 10 | 27 | 11 | 31 | 12 | 37 | 13 | 42 | 14 | 48 | 15 | 56 | 17 | 3  | 18 | 12 |
| 16 | 9  | 12 | 10 | 16 | 11 | 19 | 12 | 23 | 13 | 27 | 14 | 32 | 15 | 38 | 16 | 44 | 17 | 52 |
| 15 | 9  | 2  | 10 | 4  | 11 | 6  | 12 | 9  | 13 | 12 | 14 | 16 | 15 | 21 | 16 | 25 | 17 | 32 |
| 14 | 8  | 52 | 9  | 53 | 10 | 54 | 11 | 55 | 12 | 57 | 14 | 0  | 15 | 4  | 16 | 7  | 17 | 12 |
| 13 | 8  | 42 | 9  | 42 | 10 | 41 | 11 | 42 | 12 | 42 | 13 | 44 | 14 | 47 | 15 | 49 | 16 | 53 |
| 12 | 8  | 32 | 9  | 31 | 10 | 29 | 11 | 28 | 12 | 28 | 13 | 28 | 14 | 30 | 15 | 31 | 16 | 34 |
| 11 | 8  | 22 | 9  | 20 | 10 | 17 | 11 | 15 | 12 | 13 | 13 | 13 | 14 | 13 | 15 | 13 | 16 | 14 |
| 10 | 8  | 12 | 9  | 9  | 10 | 5  | 11 | 2  | 11 | 59 | 12 | 57 | 13 | 56 | 14 | 55 | 15 | 55 |
| 9  | 8  | 2  | 8  | 58 | 9  | 53 | 10 | 49 | 11 | 45 | 12 | 42 | 13 | 40 | 14 | 37 | 15 | 37 |
| 8  | 7  | 52 | 8  | 47 | 9  | 41 | 10 | 36 | 11 | 31 | 12 | 26 | 13 | 23 | 14 | 20 | 15 | 18 |
| 7  | 7  | 43 | 8  | 36 | 9  | 29 | 10 | 23 | 11 | 16 | 12 | 11 | 13 | 7  | 14 | 2  | 14 | 50 |
| 6  | 7  | 33 | 8  | 26 | 9  | 17 | 10 | 10 | 11 | 2  | 11 | 56 | 12 | 51 | 13 | 45 | 14 | 40 |
| 5  | 7  | 24 | 8  | 15 | 9  | 5  | 9  | 57 | 10 | 48 | 11 | 41 | 12 | 35 | 13 | 27 | 14 | 22 |
| 4  | 7  | 14 | 8  | 4  | 8  | 54 | 9  | 44 | 10 | 35 | 11 | 26 | 12 | 18 | 13 | 10 | 14 | 4  |
| 3  | 7  | 5  | 7  | 54 | 8  | 42 | 9  | 31 | 10 | 21 | 11 | 11 | 12 | 2  | 12 | 53 | 13 | 45 |
| 2  | 6  | 55 | 7  | 43 | 8  | 30 | 9  | 18 | 10 | 7  | 10 | 56 | 11 | 46 | 12 | 35 | 13 | 17 |
| 1  | 6  | 45 | 7  | 33 | 8  | 19 | 9  | 6  | 9  | 53 | 10 | 41 | 11 | 30 | 12 | 18 | 13 | 8  |
| 0  | 6  | 36 | 7  | 22 | 8  | 7  | 8  | 53 | 9  | 39 | 10 | 26 | 11 | 14 | 12 | 1  | 12 | 50 |



# TABVLA POSITIONVM AD 54.

| Eleuatio | I    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |
|----------|------|------|------|------|------|------|------|------|
|          | 0    | 1    | 2    | 2    | 3    | 4    | 5    | 5    |
|          | 0 44 | 1 27 | 2 11 | 2 55 | 3 39 | 4 23 | 5 7  | 5 52 |
| Decli    | 1    | 1 25 | 2 8  | 2 51 | 3 34 | 4 17 | 5 0  | 5 44 |
|          | 2    | 1 23 | 2 5  | 2 47 | 3 29 | 4 10 | 4 52 | 5 35 |
| na       | 3    | 1 21 | 2 2  | 2 42 | 3 23 | 4 4  | 4 45 | 5 27 |
| tio      | 4    | 1 19 | 1 58 | 2 38 | 3 18 | 3 58 | 4 37 | 5 18 |
|          | 5    | 1 17 | 1 55 | 2 34 | 3 13 | 3 51 | 4 30 | 5 10 |
| AVS      | 6    | 1 14 | 1 52 | 2 30 | 3 7  | 3 45 | 4 23 | 5 1  |
|          | 7    | 1 12 | 1 49 | 2 25 | 3 2  | 3 39 | 4 15 | 4 53 |
| TRA      | 8    | 1 10 | 1 46 | 2 21 | 2 57 | 3 32 | 4 8  | 4 44 |
|          | 9    | 1 8  | 1 42 | 2 17 | 2 51 | 3 26 | 4 0  | 4 36 |
| LIS      | 10   | 1 6  | 1 39 | 2 13 | 2 46 | 3 19 | 3 53 | 4 27 |
|          | 11   | 1 4  | 1 36 | 2 8  | 2 41 | 3 13 | 3 45 | 4 18 |
| supra    | 12   | 1 2  | 1 33 | 2 4  | 2 35 | 3 6  | 3 37 | 4 9  |
| terram   | 13   | 0 59 | 1 29 | 1 59 | 2 30 | 3 0  | 3 30 | 4 0  |
|          | 14   | 0 57 | 1 26 | 1 55 | 2 24 | 2 53 | 3 22 | 3 51 |
|          | 15   | 0 55 | 1 23 | 1 51 | 2 18 | 2 46 | 3 14 | 3 42 |
| BT       | 16   | 0 53 | 1 19 | 1 46 | 2 13 | 2 39 | 3 6  | 3 33 |
|          | 17   | 0 50 | 1 16 | 1 41 | 2 7  | 2 33 | 2 58 | 3 24 |
| BORE     | 18   | 0 48 | 1 12 | 1 37 | 2 1  | 2 26 | 2 50 | 3 15 |
|          | 19   | 0 46 | 1 9  | 1 32 | 1 55 | 2 19 | 2 42 | 3 6  |
| ALIS     | 20   | 0 43 | 1 5  | 1 28 | 1 50 | 2 11 | 2 33 | 2 56 |
|          | 21   | 0 41 | 1 2  | 1 23 | 1 44 | 2 4  | 2 25 | 2 46 |
| sub      | 22   | 0 38 | 0 58 | 1 18 | 1 37 | 1 57 | 2 16 | 2 37 |
|          | 23   | 0 36 | 0 54 | 1 13 | 1 31 | 1 50 | 2 8  | 2 27 |
| ter      | 24   | 0 34 | 0 51 | 1 8  | 1 25 | 1 42 | 1 59 | 2 17 |
|          | 25   | 0 31 | 0 47 | 1 3  | 1 19 | 1 34 | 1 50 | 2 7  |
| ra       | 26   | 0 29 | 0 43 | 0 58 | 1 12 | 1 27 | 1 41 | 1 56 |
|          | 27   | 0 26 | 0 39 | 0 52 | 1 6  | 1 19 | 1 32 | 1 46 |
|          | 28   | 0 23 | 0 35 | 0 47 | 0 59 | 1 11 | 1 22 | 1 35 |
|          | 29   | 0 20 | 0 31 | 0 42 | 0 52 | 1 3  | 1 13 | 1 24 |
|          | 30   | 0 18 | 0 27 | 0 36 | 0 45 | 0 54 | 1 3  | 1 13 |
|          | 31   | 0 15 | 0 23 | 0 31 | 0 38 | 0 46 | 0 53 | 1 1  |
|          | 32   | 0 12 | 0 18 | 0 25 | 0 31 | 0 37 | 0 43 | 0 50 |



## GRADVS LATITVDINIS.

|    | 9    | 10   | 11   | 12   | 13   | 14    | 15    | 16    | 17    | poli |
|----|------|------|------|------|------|-------|-------|-------|-------|------|
| 6  | 6    | 6    | 6    | 6    | 6    | 6     | 6     | 6     | 6     |      |
| 0  | 6 36 | 7 22 | 8 7  | 8 53 | 9 39 | 10 26 | 11 14 | 12 1  | 12 50 |      |
| 1  | 6 27 | 7 11 | 7 55 | 8 40 | 9 25 | 10 11 | 10 58 | 11 44 | 12 32 |      |
| 2  | 6 17 | 7 1  | 7 44 | 8 28 | 9 11 | 9 56  | 10 42 | 11 27 | 12 13 |      |
| 3  | 6 7  | 6 50 | 7 32 | 7 15 | 8 57 | 9 41  | 10 26 | 11 9  | 11 55 |      |
| 4  | 5 58 | 6 40 | 7 20 | 8 2  | 8 43 | 9 26  | 10 10 | 10 52 | 11 36 |      |
| 5  | 5 48 | 6 29 | 7 9  | 7 51 | 8 30 | 9 11  | 9 53  | 10 35 | 11 18 |      |
| 6  | 5 39 | 6 18 | 6 57 | 7 36 | 8 16 | 8 56  | 9 37  | 10 17 | 11 0  |      |
| 7  | 5 29 | 6 8  | 6 45 | 7 23 | 8 2  | 8 41  | 9 21  | 10 0  | 10 41 |      |
| 8  | 5 20 | 5 57 | 6 33 | 7 10 | 7 47 | 8 26  | 9 5   | 9 42  | 10 22 |      |
| 9  | 5 10 | 5 46 | 6 21 | 6 57 | 7 33 | 8 10  | 8 48  | 9 25  | 10 3  |      |
| 10 | 5 0  | 5 35 | 6 9  | 6 44 | 7 19 | 7 55  | 8 32  | 9 7   | 9 45  |      |
| 11 | 4 50 | 5 24 | 5 57 | 6 31 | 7 5  | 7 39  | 8 15  | 8 49  | 9 26  |      |
| 12 | 4 40 | 5 13 | 5 45 | 6 18 | 6 50 | 7 24  | 7 58  | 8 31  | 9 6   |      |
| 13 | 4 30 | 5 2  | 5 33 | 6 4  | 6 36 | 7 8   | 7 41  | 8 13  | 8 47  |      |
| 14 | 4 20 | 4 51 | 5 20 | 5 51 | 6 21 | 6 52  | 7 24  | 7 55  | 8 28  |      |
| 15 | 4 10 | 4 40 | 5 8  | 5 37 | 6 6  | 6 36  | 7 7   | 7 37  | 8 8   |      |
| 16 | 4 0  | 4 28 | 4 55 | 5 23 | 5 51 | 6 20  | 6 50  | 7 18  | 7 48  |      |
| 17 | 3 40 | 4 17 | 4 43 | 5 9  | 5 36 | 6 4   | 6 32  | 6 59  | 7 18  |      |
| 18 | 3 39 | 4 5  | 4 40 | 4 55 | 5 21 | 5 47  | 6 14  | 6 40  | 7 8   |      |
| 19 | 3 28 | 3 53 | 4 17 | 4 41 | 5 5  | 5 31  | 5 56  | 6 21  | 6 47  |      |
| 20 | 3 18 | 3 41 | 4 4  | 4 27 | 4 50 | 5 14  | 5 38  | 6 2   | 6 27  |      |
| 21 | 3 7  | 3 29 | 3 50 | 4 12 | 4 34 | 4 56  | 5 20  | 5 42  | 6 6   |      |
| 22 | 2 56 | 3 17 | 3 37 | 3 57 | 4 18 | 4 39  | 5 1   | 5 22  | 5 44  |      |
| 23 | 2 45 | 3 4  | 3 23 | 3 42 | 4 2  | 4 22  | 4 42  | 5 2   | 5 23  |      |
| 24 | 2 33 | 2 52 | 3 9  | 3 27 | 3 45 | 4 4   | 4 23  | 4 41  | 5 1   |      |
| 25 | 2 22 | 2 39 | 2 55 | 3 12 | 3 28 | 3 45  | 4 3   | 4 20  | 4 38  |      |
| 26 | 2 10 | 2 26 | 2 41 | 2 56 | 3 11 | 3 27  | 3 43  | 3 59  | 4 15  |      |
| 27 | 1 58 | 2 13 | 2 26 | 2 40 | 2 54 | 3 8   | 3 23  | 3 37  | 3 52  |      |
| 28 | 1 46 | 1 59 | 2 11 | 2 24 | 2 36 | 2 49  | 3 3   | 3 15  | 3 29  |      |
| 29 | 1 34 | 1 45 | 1 56 | 2 7  | 2 18 | 2 29  | 2 42  | 2 52  | 3 5   |      |
| 30 | 1 21 | 1 31 | 1 40 | 1 50 | 1 59 | 2 9   | 2 20  | 2 29  | 2 40  |      |
| 31 | 1 8  | 1 17 | 1 25 | 1 33 | 1 41 | 1 49  | 1 58  | 2 6   | 2 15  |      |
| 32 | 0 55 | 1 2  | 1 8  | 1 15 | 1 21 | 1 28  | 1 36  | 1 42  | 1 49  |      |



# TABVLA POSITIONVM AD 54

| Elevatio       | 18 |    |    | 19 |    |  | 20 |    |  | 21 |    |  | 22 |    |  | 23 |    |  | 24 |    |  | 25 |    |  |
|----------------|----|----|----|----|----|--|----|----|--|----|----|--|----|----|--|----|----|--|----|----|--|----|----|--|
|                | g  | g  |    | g  |    |  | g  |    |  | g  |    |  | g  |    |  | g  |    |  | g  |    |  | g  |    |  |
| Decli<br>natio | 32 | 25 | 22 | 26 | 54 |  | 28 | 29 |  | 30 | 5  |  | 31 | 41 |  | 33 | 21 |  | 35 | 1  |  | 36 | 44 |  |
|                | 31 | 24 | 55 | 26 | 25 |  | 27 | 58 |  | 25 | 32 |  | 31 | 7  |  | 32 | 45 |  | 34 | 23 |  | 36 | 4  |  |
| BO             | 30 | 24 | 28 | 25 | 57 |  | 27 | 28 |  | 29 | 0  |  | 30 | 33 |  | 32 | 9  |  | 33 | 46 |  | 35 | 25 |  |
|                | 29 | 24 | 2  | 25 | 29 |  | 26 | 58 |  | 28 | 29 |  | 30 | 0  |  | 31 | 35 |  | 33 | 9  |  | 34 | 17 |  |
| RE             | 28 | 23 | 36 | 25 | 2  |  | 26 | 29 |  | 27 | 59 |  | 29 | 28 |  | 31 | 1  |  | 32 | 34 |  | 34 | 9  |  |
|                | 27 | 23 | 11 | 24 | 35 |  | 26 | 1  |  | 27 | 29 |  | 28 | 57 |  | 30 | 27 |  | 31 | 59 |  | 33 | 33 |  |
| ALIS           | 26 | 22 | 46 | 24 | 9  |  | 25 | 34 |  | 26 | 59 |  | 28 | 26 |  | 29 | 55 |  | 31 | 25 |  | 32 | 57 |  |
| supra          | 25 | 22 | 22 | 23 | 43 |  | 25 | 6  |  | 26 | 31 |  | 27 | 56 |  | 29 | 23 |  | 30 | 51 |  | 32 | 22 |  |
| terram         | 24 | 21 | 58 | 23 | 18 |  | 24 | 39 |  | 26 | 2  |  | 27 | 26 |  | 28 | 52 |  | 30 | 18 |  | 31 | 47 |  |
|                | 23 | 21 | 35 | 22 | 53 |  | 24 | 13 |  | 25 | 34 |  | 26 | 57 |  | 28 | 21 |  | 29 | 46 |  | 31 | 13 |  |
|                | 22 | 21 | 12 | 22 | 29 |  | 23 | 47 |  | 25 | 7  |  | 26 | 28 |  | 27 | 51 |  | 29 | 14 |  | 30 | 40 |  |
|                | 21 | 20 | 49 | 22 | 5  |  | 23 | 22 |  | 24 | 40 |  | 25 | 59 |  | 27 | 21 |  | 28 | 42 |  | 30 | 7  |  |
| ET             | 20 | 20 | 26 | 21 | 41 |  | 22 | 57 |  | 24 | 14 |  | 25 | 31 |  | 26 | 51 |  | 28 | 11 |  | 29 | 34 |  |
|                | 19 | 20 | 4  | 21 | 18 |  | 22 | 32 |  | 23 | 48 |  | 25 | 4  |  | 26 | 22 |  | 27 | 41 |  | 29 | 2  |  |
| AVS            | 18 | 19 | 43 | 20 | 54 |  | 22 | 7  |  | 23 | 22 |  | 24 | 37 |  | 25 | 54 |  | 27 | 11 |  | 28 | 31 |  |
|                | 17 | 19 | 21 | 20 | 31 |  | 21 | 43 |  | 22 | 56 |  | 24 | 0  |  | 25 | 25 |  | 26 | 41 |  | 28 | 0  |  |
| TRA            | 16 | 19 | 0  | 10 | 9  |  | 21 | 19 |  | 22 | 31 |  | 23 | 43 |  | 24 | 57 |  | 26 | 12 |  | 27 | 25 |  |
| LIS            | 15 | 18 | 39 | 19 | 47 |  | 20 | 56 |  | 22 | 6  |  | 23 | 17 |  | 24 | 30 |  | 25 | 43 |  | 26 | 55 |  |
| sub            | 14 | 18 | 18 | 19 | 24 |  | 20 | 32 |  | 21 | 42 |  | 22 | 51 |  | 24 | 3  |  | 25 | 14 |  | 26 | 29 |  |
|                | 13 | 17 | 57 | 19 | 3  |  | 20 | 9  |  | 21 | 17 |  | 22 | 25 |  | 23 | 36 |  | 24 | 46 |  | 25 | 59 |  |
| terra          | 12 | 17 | 37 | 18 | 41 |  | 19 | 46 |  | 20 | 53 |  | 22 | 0  |  | 23 | 9  |  | 24 | 18 |  | 25 | 29 |  |
|                | 11 | 17 | 16 | 18 | 19 |  | 19 | 23 |  | 20 | 29 |  | 21 | 34 |  | 22 | 4  |  | 22 | 0  |  | 25 | 0  |  |
|                | 10 | 16 | 56 | 17 | 58 |  | 19 | 1  |  | 20 | 5  |  | 21 | 9  |  | 22 | 16 |  | 23 | 22 |  | 24 | 31 |  |
|                | 9  | 16 | 36 | 17 | 37 |  | 18 | 38 |  | 19 | 41 |  | 20 | 44 |  | 21 | 40 |  | 2  | 5  |  | 24 | 2  |  |
|                | 8  | 16 | 16 | 17 | 15 |  | 18 | 16 |  | 19 | 18 |  | 20 | 19 |  | 21 | 23 |  | 22 | 27 |  | 23 | 33 |  |
|                | 7  | 15 | 56 | 16 | 54 |  | 17 | 54 |  | 18 | 54 |  | 19 | 55 |  | 20 | 57 |  | 22 | 0  |  | 23 | 5  |  |
|                | 6  | 15 | 36 | 16 | 33 |  | 17 | 32 |  | 18 | 31 |  | 19 | 30 |  | 20 | 31 |  | 21 | 33 |  | 22 | 37 |  |
|                | 5  | 15 | 17 | 16 | 13 |  | 17 | 9  |  | 18 | 7  |  | 19 | 6  |  | 20 | 6  |  | 21 | 6  |  | 22 | 8  |  |
|                | 4  | 14 | 57 | 15 | 52 |  | 16 | 47 |  | 17 | 45 |  | 18 | 41 |  | 19 | 40 |  | 20 | 39 |  | 21 | 40 |  |
|                | 3  | 14 | 38 | 15 | 31 |  | 16 | 26 |  | 17 | 21 |  | 18 | 17 |  | 19 | 15 |  | 20 | 12 |  | 21 | 12 |  |
|                | 2  | 14 | 18 | 15 | 10 |  | 16 | 4  |  | 16 | 58 |  | 17 | 53 |  | 18 | 49 |  | 19 | 45 |  | 20 | 44 |  |
|                | 1  | 13 | 58 | 14 | 50 |  | 15 | 42 |  | 16 | 35 |  | 17 | 28 |  | 18 | 23 |  | 19 | 19 |  | 20 | 16 |  |
|                | 0  | 13 | 39 | 14 | 29 |  | 15 | 20 |  | 16 | 12 |  | 17 | 4  |  | 17 | 58 |  | 18 | 52 |  | 19 | 48 |  |



## GRADVS LATITVDINIS.

|    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| ̄  | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄    |
| 32 | 38 30 | 40 18 | 42 7  | 44 1  | 45 57 | 47 56 | 49 59 | 52 5  | 54 17 |      |
| 31 | 37 47 | 49 34 | 41 21 | 43 12 | 45 6  | 47 3  | 49 3  | 51 7  | 53 16 |      |
| 30 | 37 6  | 38 50 | 40 36 | 42 25 | 44 16 | 46 11 | 48 9  | 50 10 | 52 16 |      |
| 29 | 36 26 | 38 8  | 39 51 | 41 39 | 43 28 | 45 20 | 47 16 | 49 15 | 51 18 |      |
| 28 | 35 47 | 37 27 | 39 8  | 40 53 | 42 41 | 44 31 | 46 24 | 48 21 | 50 22 |      |
| 27 | 35 8  | 36 47 | 38 26 | 40 9  | 41 54 | 43 43 | 45 34 | 47 28 | 49 27 |      |
| 26 | 34 31 | 36 7  | 37 45 | 39 26 | 41 9  | 42 55 | 44 45 | 46 37 | 48 33 |      |
| 25 | 33 54 | 35 29 | 37 4  | 38 44 | 40 25 | 42 9  | 43 56 | 45 47 | 47 41 |      |
| 24 | 33 18 | 34 51 | 36 25 | 38 2  | 39 42 | 41 24 | 43 9  | 44 57 | 46 50 |      |
| 23 | 32 42 | 34 13 | 35 45 | 37 22 | 38 59 | 40 40 | 42 23 | 44 9  | 45 59 |      |
| 22 | 32 7  | 33 37 | 35 7  | 36 41 | 38 17 | 39 56 | 41 37 | 43 22 | 45 10 |      |
| 21 | 31 32 | 33 1  | 34 29 | 36 2  | 37 36 | 39 13 | 40 53 | 42 35 | 44 21 |      |
| 20 | 30 59 | 32 25 | 33 52 | 35 23 | 36 56 | 38 31 | 40 9  | 41 49 | 43 34 |      |
| 19 | 30 25 | 31 50 | 33 16 | 34 45 | 36 16 | 37 49 | 39 25 | 4 4   | 42 47 |      |
| 18 | 29 52 | 31 16 | 32 40 | 34 8  | 35 37 | 37 9  | 38 43 | 40 20 | 42 1  |      |
| 17 | 29 20 | 30 42 | 32 4  | 33 30 | 34 58 | 36 28 | 38 1  | 39 36 | 41 15 |      |
| 16 | 28 48 | 30 8  | 31 29 | 32 53 | 34 20 | 35 48 | 37 19 | 38 53 | 40 30 |      |
| 15 | 28 16 | 29 35 | 30 54 | 32 17 | 33 42 | 35 9  | 36 38 | 38 10 | 39 46 |      |
| 14 | 27 44 | 29 2  | 30 20 | 31 41 | 33 5  | 34 30 | 35 58 | 37 28 | 39 2  |      |
| 13 | 27 13 | 28 29 | 29 46 | 31 6  | 32 28 | 33 51 | 35 18 | 36 46 | 38 15 |      |
| 12 | 26 42 | 27 57 | 29 12 | 30 31 | 31 51 | 33 13 | 34 38 | 36 5  | 37 36 |      |
| 11 | 26 11 | 27 25 | 28 39 | 29 56 | 31 15 | 32 35 | 33 59 | 35 24 | 36 53 |      |
| 10 | 25 41 | 26 53 | 28 6  | 29 22 | 30 39 | 31 58 | 33 20 | 34 44 | 36 11 |      |
| 9  | 25 11 | 26 22 | 27 33 | 28 47 | 30 4  | 31 21 | 32 41 | 34 3  | 35 29 |      |
| 8  | 24 41 | 25 50 | 27 0  | 28 13 | 29 27 | 30 44 | 32 2  | 33 23 | 34 47 |      |
| 7  | 23 11 | 25 19 | 26 28 | 27 39 | 28 52 | 30 7  | 31 24 | 32 43 | 34 6  |      |
| 6  | 23 41 | 24 48 | 25 55 | 27 5  | 28 17 | 29 30 | 30 46 | 32 4  | 33 25 |      |
| 5  | 22 12 | 24 17 | 25 23 | 26 32 | 27 42 | 28 54 | 30 8  | 31 24 | 32 44 |      |
| 4  | 22 42 | 23 47 | 24 51 | 25 58 | 27 7  | 28 17 | 29 30 | 30 45 | 32 3  |      |
| 3  | 21 13 | 23 16 | 24 19 | 25 25 | 26 32 | 27 41 | 28 53 | 30 6  | 3 23  |      |
| 2  | 21 44 | 22 45 | 23 47 | 24 52 | 25 57 | 27 5  | 28 15 | 29 7  | 30 12 |      |
| 1  | 21 14 | 22 15 | 23 15 | 24 18 | 25 23 | 26 29 | 27 37 | 28 48 | 30 1  |      |
| 0  | 20 45 | 21 44 | 22 43 | 23 45 | 24 48 | 25 53 | 27 0  | 28 9  | 29 21 |      |



# TABVLA POSITIONVM AD 54

| Elevatio | 18 | 19    | 20    | 21    | 22    | 23    | 24    | 25    |
|----------|----|-------|-------|-------|-------|-------|-------|-------|
|          | g  | g     | g     | g     | g     | g     | g     | g     |
| Decli    | 0  | 13 39 | 14 29 | 15 20 | 16 12 | 17 4  | 17 58 | 18 52 |
| natio    | 1  | 13 20 | 14 8  | 14 58 | 15 49 | 16 40 | 17 33 | 18 25 |
|          | 2  | 13 0  | 13 47 | 14 36 | 15 26 | 16 15 | 17 7  | 17 59 |
| AVS      | 3  | 12 40 | 13 27 | 14 14 | 15 3  | 15 51 | 16 41 | 17 32 |
|          | 4  | 12 21 | 13 6  | 13 53 | 14 40 | 15 27 | 16 16 | 17 5  |
| TRA      | 5  | 12 1  | 12 45 | 13 31 | 14 17 | 15 2  | 15 50 | 16 38 |
|          | 6  | 11 42 | 12 25 | 13 8  | 13 53 | 14 38 | 15 25 | 16 11 |
| LIS      | 7  | 11 22 | 12 4  | 12 46 | 13 30 | 14 13 | 14 59 | 15 44 |
| su       | 8  | 11 2  | 11 43 | 12 24 | 13 6  | 13 49 | 14 33 | 15 17 |
|          | 9  | 10 42 | 11 21 | 12 2  | 12 43 | 13 24 | 14 7  | 14 51 |
| pra      | 10 | 10 22 | 11 0  | 11 39 | 12 21 | 12 59 | 13 40 | 14 22 |
|          | 11 | 10 2  | 10 39 | 11 17 | 11 55 | 12 34 | 13 14 | 13 54 |
| ter      | 12 | 9 41  | 10 17 | 10 54 | 11 31 | 12 8  | 12 47 | 13 26 |
| ram      | 13 | 9 21  | 9 55  | 10 31 | 11 7  | 11 43 | 12 20 | 12 58 |
|          | 14 | 9 0   | 9 34  | 10 8  | 10 42 | 11 17 | 11 53 | 12 30 |
|          | 15 | 8 39  | 9 11  | 9 44  | 10 18 | 10 51 | 11 26 | 12 1  |
| ET       | 16 | 8 18  | 8 49  | 9 21  | 9 53  | 10 25 | 10 59 | 11 32 |
|          | 17 | 7 57  | 8 27  | 8 57  | 9 28  | 9 58  | 10 31 | 11 3  |
| BO       | 18 | 7 35  | 8 4   | 8 33  | 9 2   | 9 31  | 10 2  | 10 33 |
| RE       | 19 | 7 14  | 7 40  | 8 8   | 8 36  | 9 4   | 9 34  | 10 3  |
| ALIS     | 20 | 6 52  | 7 17  | 7 43  | 8 10  | 8 37  | 9 5   | 9 33  |
|          | 21 | 6 29  | 6 53  | 7 18  | 7 44  | 8 9   | 8 35  | 9 2   |
| sub      | 22 | 6 6   | 6 29  | 6 53  | 7 17  | 7 40  | 8 5   | 8 30  |
|          | 23 | 5 43  | 6 5   | 6 27  | 6 50  | 7 11  | 7 35  | 7 58  |
| ter      | 24 | 5 20  | 5 40  | 6 1   | 6 22  | 6 42  | 7 4   | 7 26  |
|          | 25 | 4 56  | 5 15  | 5 34  | 5 53  | 6 12  | 6 33  | 6 53  |
| ra       | 26 | 4 32  | 4 49  | 5 6   | 5 25  | 5 42  | 6 1   | 6 19  |
|          | 27 | 4 7   | 4 23  | 4 39  | 4 55  | 5 11  | 5 29  | 5 45  |
|          | 28 | 3 42  | 3 56  | 4 11  | 4 25  | 4 40  | 4 55  | 5 10  |
|          | 29 | 3 16  | 3 29  | 3 42  | 3 55  | 4 8   | 4 21  | 4 35  |
|          | 30 | 2 50  | 3 1   | 3 12  | 3 24  | 3 35  | 3 47  | 3 58  |
|          | 31 | 2 23  | 2 33  | 2 42  | 2 52  | 3 1   | 3 11  | 3 21  |
|          | 32 | 1 56  | 2 4   | 2 11  | 2 19  | 2 27  | 2 35  | 2 43  |



GRADVS LATITVDINIS.

|    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0  | 20 45 | 21 44 | 22 43 | 23 45 | 24 48 | 25 53 | 27 0  | 28 9  | 29 21 |
| 1  | 20 16 | 21 13 | 22 11 | 23 12 | 24 13 | 25 17 | 26 23 | 27 30 | 28 41 |
| 2  | 19 46 | 20 43 | 21 39 | 22 38 | 23 39 | 24 41 | 25 45 | 26 51 | 28 0  |
| 3  | 19 17 | 20 12 | 21 7  | 22 5  | 23 4  | 24 5  | 25 7  | 26 12 | 27 19 |
| 4  | 18 48 | 19 41 | 20 35 | 21 32 | 22 29 | 23 29 | 24 30 | 25 33 | 26 39 |
| 5  | 18 18 | 19 11 | 20 3  | 20 58 | 21 54 | 22 52 | 23 52 | 24 54 | 25 58 |
| 6  | 17 49 | 18 40 | 19 31 | 20 25 | 21 19 | 22 16 | 23 14 | 24 14 | 25 17 |
| 7  | 17 19 | 18 9  | 18 58 | 19 51 | 20 44 | 21 39 | 22 36 | 23 35 | 24 36 |
| 8  | 16 49 | 17 38 | 18 26 | 19 17 | 20 9  | 21 2  | 21 58 | 22 55 | 23 55 |
| 9  | 16 19 | 17 6  | 17 53 | 18 43 | 19 33 | 20 25 | 21 19 | 22 15 | 23 13 |
| 10 | 15 49 | 16 35 | 17 20 | 18 8  | 18 57 | 19 48 | 20 40 | 21 34 | 22 31 |
| 11 | 15 19 | 16 3  | 16 47 | 17 34 | 18 21 | 19 11 | 20 1  | 20 54 | 21 49 |
| 12 | 14 48 | 15 31 | 16 14 | 16 59 | 17 45 | 18 33 | 19 22 | 20 13 | 21 6  |
| 13 | 14 17 | 14 59 | 15 40 | 16 24 | 17 8  | 17 55 | 18 42 | 19 32 | 20 23 |
| 14 | 13 46 | 14 26 | 15 6  | 15 49 | 16 31 | 17 16 | 18 2  | 18 50 | 19 40 |
| 15 | 13 14 | 13 53 | 14 32 | 15 13 | 15 54 | 16 37 | 17 22 | 18 8  | 18 56 |
| 16 | 12 42 | 13 20 | 13 57 | 14 37 | 15 16 | 15 58 | 16 41 | 17 25 | 18 12 |
| 17 | 12 10 | 12 46 | 13 22 | 14 0  | 14 38 | 15 18 | 15 59 | 16 42 | 17 27 |
| 18 | 11 38 | 12 12 | 12 46 | 13 22 | 13 59 | 14 37 | 15 17 | 15 58 | 16 41 |
| 19 | 11 5  | 11 38 | 12 10 | 12 45 | 13 20 | 13 57 | 14 35 | 15 14 | 15 55 |
| 20 | 10 31 | 11 3  | 11 34 | 12 7  | 12 40 | 13 15 | 13 51 | 14 29 | 15 8  |
| 21 | 9 58  | 10 27 | 10 57 | 11 28 | 12 0  | 12 33 | 13 7  | 13 41 | 14 21 |
| 22 | 9 23  | 9 51  | 10 19 | 10 49 | 11 11 | 11 50 | 12 23 | 12 56 | 13 32 |
| 23 | 8 48  | 9 15  | 9 40  | 10 8  | 10 37 | 11 6  | 11 37 | 12 9  | 12 43 |
| 24 | 8 12  | 8 37  | 9 1   | 9 28  | 9 54  | 10 22 | 10 51 | 11 21 | 11 52 |
| 25 | 7 36  | 7 59  | 8 22  | 8 46  | 9 11  | 9 37  | 10 4  | 10 31 | 11 1  |
| 26 | 6 59  | 7 21  | 7 41  | 8 4   | 8 27  | 8 51  | 9 15  | 9 41  | 10 9  |
| 27 | 6 22  | 6 41  | 7 0   | 7 21  | 7 42  | 8 3   | 8 26  | 8 50  | 9 15  |
| 28 | 5 43  | 6 1   | 6 18  | 6 37  | 6 55  | 7 15  | 7 36  | 7 57  | 8 20  |
| 29 | 5 4   | 5 20  | 5 35  | 5 51  | 6 8   | 6 26  | 6 44  | 7 3   | 7 24  |
| 30 | 4 24  | 4 38  | 4 50  | 5 5   | 5 20  | 5 35  | 5 51  | 6 8   | 6 26  |
| 31 | 3 43  | 3 54  | 4 5   | 4 18  | 4 30  | 4 43  | 4 57  | 5 11  | 5 26  |
| 32 | 3 0   | 3 10  | 3 19  | 3 29  | 3 39  | 3 50  | 4 1   | 4 12  | 4 25  |

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# TABVLA POSITIONVM AD 54

| Eleuatio | 35 | 36    | 37    | 38    | 39    | 40    | 41    | 42    |       |
|----------|----|-------|-------|-------|-------|-------|-------|-------|-------|
|          | 32 | 56 32 | 58 52 | 61 17 | 63 48 | 66 25 | 69 11 | 72 4  | 75 6  |
| Decli    | 31 | 55 28 | 57 45 | 60 7  | 62 35 | 65 9  | 67 51 | 70 39 | 73 36 |
| na       | 30 | 54 26 | 56 40 | 58 59 | 61 24 | 63 54 | 66 33 | 69 17 | 72 10 |
|          | 29 | 53 25 | 55 37 | 57 53 | 60 15 | 62 42 | 65 17 | 67 58 | 70 47 |
| tio      | 28 | 52 26 | 54 35 | 56 49 | 59 8  | 61 32 | 64 4  | 66 41 | 69 27 |
| BO       | 27 | 51 29 | 53 36 | 55 47 | 58 3  | 60 24 | 62 53 | 65 27 | 68 9  |
| RE       | 26 | 50 33 | 52 37 | 54 46 | 56 59 | 59 18 | 61 44 | 64 15 | 66 54 |
|          | 25 | 49 38 | 51 40 | 53 46 | 55 56 | 58 3  | 60 36 | 63 5  | 65 41 |
| ALIS     | 24 | 48 45 | 50 44 | 52 48 | 54 56 | 57 10 | 59 30 | 62 56 | 64 29 |
|          | 23 | 47 52 | 49 50 | 51 51 | 53 57 | 56 8  | 58 26 | 60 49 | 63 15 |
| supra    | 22 | 47 2  | 48 57 | 50 56 | 52 59 | 55 8  | 57 23 | 59 44 | 62 11 |
|          | 21 | 46 11 | 48 4  | 50 1  | 52 2  | 54 9  | 56 21 | 58 40 | 61 4  |
| terram   | 20 | 45 21 | 47 12 | 49 7  | 51 6  | 53 10 | 55 21 | 57 37 | 59 59 |
|          | 19 | 44 32 | 46 21 | 48 14 | 50 11 | 52 13 | 54 22 | 56 35 | 58 5  |
| ET       | 18 | 43 44 | 45 31 | 47 22 | 49 17 | 51 17 | 53 23 | 55 34 | 57 52 |
|          | 17 | 42 57 | 44 12 | 46 31 | 48 24 | 50 22 | 52 26 | 54 35 | 56 50 |
| AVS      | 16 | 42 10 | 43 54 | 45 11 | 47 32 | 49 28 | 51 29 | 53 36 | 55 45 |
|          | 15 | 41 24 | 43 6  | 44 51 | 46 40 | 48 34 | 50 34 | 52 38 | 54 45 |
| TRA      | 14 | 40 38 | 42 18 | 44 2  | 45 49 | 47 41 | 49 39 | 51 41 | 53 49 |
|          | 13 | 39 53 | 41 31 | 43 13 | 44 59 | 46 48 | 48 44 | 50 45 | 52 51 |
| LIS      | 12 | 39 9  | 40 45 | 42 25 | 44 9  | 45 57 | 47 50 | 49 49 | 51 53 |
|          | 11 | 38 24 | 39 59 | 41 37 | 43 19 | 45 5  | 46 57 | 48 54 | 50 56 |
| sub      | 10 | 37 41 | 39 14 | 40 50 | 42 30 | 44 15 | 46 4  | 47 59 | 49 5  |
| ter      | 9  | 36 57 | 38 28 | 40 3  | 41 41 | 43 24 | 45 12 | 47 5  | 49 3  |
| ra       | 8  | 36 14 | 37 44 | 39 17 | 40 53 | 42 34 | 44 20 | 46 11 | 48 7  |
|          | 7  | 35 31 | 36 59 | 38 31 | 40 5  | 41 44 | 43 29 | 45 18 | 47 12 |
|          | 6  | 34 48 | 36 15 | 37 45 | 39 18 | 40 55 | 42 38 | 44 25 | 46 17 |
|          | 5  | 34 6  | 35 31 | 36 59 | 38 30 | 40 6  | 41 47 | 43 32 | 45 22 |
|          | 4  | 33 13 | 34 47 | 36 13 | 37 43 | 39 17 | 40 56 | 42 39 | 44 28 |
|          | 3  | 32 41 | 34 3  | 35 28 | 36 56 | 38 28 | 40 5  | 41 47 | 43 33 |
|          | 2  | 31 59 | 33 19 | 34 43 | 36 9  | 37 39 | 39 15 | 40 54 | 42 39 |
|          | 1  | 31 27 | 32 36 | 33 57 | 35 22 | 36 51 | 38 24 | 40 2  | 41 45 |
|          | 0  | 30 35 | 31 52 | 33 12 | 34 35 | 36 2  | 37 34 | 39 10 | 40 51 |



# GRADVS LATITVDINIS.

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|    | 43    | 44    | 45    | 46    | 47    | 48    | 49     | 50     | 51     |
|----|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| 32 | 78 17 | 81 40 | 85 16 | 89 7  | 93 15 | 97 45 | 102 39 | 108 7  | 114 18 |
| 31 | 76 44 | 80 1  | 83 32 | 87 17 | 91 18 | 95 40 | 100 26 | 105 43 | 111 42 |
| 30 | 75 14 | 78 26 | 81 52 | 85 31 | 89 26 | 93 41 | 98 19  | 103 28 | 109 17 |
| 29 | 73 47 | 76 55 | 80 16 | 83 50 | 87 39 | 91 48 | 96 19  | 101 20 | 107 0  |
| 28 | 72 23 | 75 27 | 78 43 | 82 13 | 85 57 | 90 0  | 94 24  | 99 18  | 104 50 |
| 27 | 71 1  | 74 2  | 77 14 | 80 39 | 84 18 | 88 16 | 92 35  | 97 22  | 102 48 |
| 26 | 69 42 | 72 39 | 75 47 | 79 8  | 82 43 | 86 36 | 90 50  | 95 31  | 100 50 |
| 25 | 68 26 | 71 19 | 74 24 | 77 40 | 81 11 | 85 0  | 89 8   | 93 45  | 98 58  |
| 24 | 67 11 | 70 1  | 73 2  | 76 15 | 79 42 | 83 26 | 87 30  | 92 2   | 97 9   |
| 23 | 65 58 | 68 45 | 71 43 | 74 53 | 78 15 | 81 56 | 85 56  | 90 22  | 95 26  |
| 22 | 64 47 | 67 31 | 70 26 | 73 32 | 76 51 | 80 28 | 84 24  | 88 46  | 93 44  |
| 21 | 63 38 | 66 19 | 69 10 | 72 13 | 75 29 | 79 2  | 82 54  | 87 13  | 92 6   |
| 20 | 62 29 | 65 8  | 67 57 | 70 56 | 74 9  | 77 39 | 81 27  | 85 41  | 90 31  |
| 19 | 61 23 | 63 58 | 66 45 | 69 41 | 72 51 | 76 17 | 80 2   | 84 13  | 88 58  |
| 18 | 60 17 | 62 50 | 65 34 | 68 28 | 71 34 | 74 57 | 78 39  | 82 46  | 87 27  |
| 17 | 59 13 | 61 43 | 64 24 | 67 15 | 70 19 | 73 39 | 77 18  | 81 21  | 85 59  |
| 16 | 58 10 | 60 38 | 63 16 | 66 4  | 69 5  | 72 22 | 75 58  | 79 58  | 84 32  |
| 15 | 57 7  | 59 33 | 62 8  | 64 55 | 67 53 | 71 7  | 74 39  | 78 36  | 83 7   |
| 14 | 56 6  | 58 29 | 61 2  | 63 46 | 66 41 | 69 53 | 73 22  | 77 16  | 81 44  |
| 13 | 55 5  | 57 26 | 59 57 | 62 38 | 65 31 | 68 39 | 72 6   | 75 58  | 80 22  |
| 12 | 54 5  | 56 24 | 58 52 | 61 31 | 64 22 | 67 27 | 70 51  | 74 39  | 79 1   |
| 11 | 53 6  | 55 22 | 57 49 | 60 25 | 63 13 | 66 16 | 69 37  | 73 23  | 77 41  |
| 10 | 52 7  | 54 21 | 56 45 | 59 19 | 62 5  | 65 6  | 68 24  | 72 7   | 76 23  |
| 9  | 51 9  | 53 21 | 55 43 | 58 14 | 60 58 | 63 56 | 67 12  | 70 52  | 75 5   |
| 8  | 50 11 | 52 28 | 54 41 | 57 10 | 59 51 | 62 47 | 66 0   | 69 37  | 73 48  |
| 7  | 49 13 | 51 22 | 53 39 | 56 6  | 58 45 | 61 38 | 64 49  | 68 24  | 72 31  |
| 6  | 48 16 | 50 23 | 52 38 | 55 3  | 57 39 | 60 30 | 63 39  | 67 11  | 71 15  |
| 5  | 47 20 | 49 24 | 51 37 | 54 0  | 56 34 | 59 23 | 62 29  | 65 58  | 70 0   |
| 4  | 46 23 | 48 25 | 50 37 | 52 57 | 55 29 | 58 15 | 61 19  | 64 46  | 68 45  |
| 3  | 45 27 | 47 27 | 49 36 | 51 55 | 54 24 | 57 8  | 60 9   | 63 34  | 67 31  |
| 2  | 44 31 | 46 29 | 48 36 | 50 52 | 53 20 | 56 1  | 59 0   | 62 22  | 66 16  |
| 1  | 43 35 | 45 31 | 47 36 | 49 50 | 52 15 | 54 55 | 57 51  | 61 11  | 65 2   |
| 0  | 42 39 | 44 34 | 46 36 | 48 48 | 51 11 | 53 48 | 56 42  | 59 59  | 63 48  |

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| Eleuatio | 35 | 36    | 37    | 38    | 39    | 40    | 41    | 42    |       |
|----------|----|-------|-------|-------|-------|-------|-------|-------|-------|
|          | g  | g     | g     | g     | g     | g     | g     | g     |       |
| Decli    | 0  | 30 35 | 31 52 | 33 12 | 34 35 | 36 2  | 37 34 | 39 10 | 40 51 |
| ratio    | 1  | 29 53 | 31 8  | 32 27 | 33 48 | 35 13 | 36 44 | 38 18 | 39 57 |
| AVS      | 2  | 29 11 | 30 25 | 31 41 | 33 1  | 34 27 | 35 53 | 37 26 | 39 3  |
| TRA      | 3  | 28 29 | 29 41 | 30 56 | 32 14 | 33 36 | 35 3  | 36 33 | 38 9  |
| LIS      | 4  | 27 47 | 28 57 | 30 11 | 31 27 | 32 47 | 34 12 | 35 41 | 37 14 |
| supra    | 5  | 27 4  | 28 13 | 29 24 | 30 40 | 31 58 | 33 21 | 34 48 | 36 20 |
| ter      | 6  | 26 22 | 27 29 | 28 39 | 29 52 | 31 9  | 32 30 | 33 55 | 35 25 |
| ram      | 7  | 25 39 | 26 45 | 27 53 | 29 5  | 30 20 | 31 39 | 33 2  | 34 30 |
| BT       | 8  | 24 56 | 26 0  | 27 7  | 28 17 | 29 30 | 30 48 | 32 9  | 33 35 |
| BO       | 9  | 24 13 | 25 16 | 26 21 | 27 29 | 28 40 | 29 56 | 31 15 | 32 39 |
| REA      | 10 | 23 29 | 24 30 | 25 36 | 26 40 | 27 49 | 29 4  | 30 21 | 31 43 |
| LIS      | 11 | 22 46 | 23 45 | 24 47 | 25 51 | 26 59 | 28 11 | 29 26 | 30 46 |
| sub      | 12 | 22 1  | 22 59 | 23 59 | 25 1  | 26 7  | 27 18 | 28 31 | 29 49 |
| ter      | 13 | 21 17 | 22 13 | 23 11 | 24 11 | 25 16 | 26 24 | 27 35 | 28 51 |
| ra       | 14 | 20 32 | 21 26 | 22 22 | 23 21 | 24 23 | 25 29 | 26 39 | 27 53 |
|          | 15 | 19 46 | 20 38 | 21 33 | 22 30 | 23 30 | 24 34 | 25 42 | 26 53 |
|          | 16 | 19 0  | 19 50 | 20 43 | 21 38 | 22 36 | 23 39 | 24 44 | 25 53 |
|          | 17 | 18 13 | 19 2  | 19 53 | 20 46 | 21 42 | 22 42 | 23 45 | 24 52 |
|          | 18 | 17 26 | 18 13 | 19 2  | 19 53 | 20 47 | 21 45 | 22 46 | 23 50 |
|          | 19 | 16 38 | 17 23 | 18 10 | 18 59 | 19 51 | 20 46 | 21 45 | 22 47 |
|          | 20 | 15 49 | 16 32 | 17 17 | 18 4  | 18 54 | 19 47 | 20 43 | 21 43 |
|          | 21 | 14 59 | 15 40 | 16 23 | 17 8  | 17 55 | 18 47 | 19 40 | 20 38 |
|          | 22 | 14 8  | 14 47 | 15 28 | 16 11 | 16 56 | 17 45 | 18 36 | 19 31 |
|          | 23 | 13 18 | 13 54 | 14 33 | 15 13 | 15 56 | 16 42 | 17 31 | 18 23 |
|          | 24 | 12 25 | 13 0  | 13 36 | 14 14 | 14 54 | 15 38 | 16 24 | 17 13 |
|          | 25 | 11 32 | 12 4  | 12 38 | 13 14 | 13 51 | 14 32 | 15 15 | 16 1  |
|          | 26 | 10 37 | 11 7  | 11 38 | 12 11 | 12 46 | 13 24 | 14 5  | 14 48 |
|          | 27 | 9 41  | 10 8  | 10 37 | 11 7  | 11 40 | 12 15 | 12 53 | 13 33 |
|          | 28 | 8 44  | 9 9   | 9 35  | 10 2  | 10 32 | 11 4  | 11 39 | 12 15 |
|          | 29 | 7 45  | 8 7   | 8 31  | 8 55  | 9 22  | 9 51  | 10 22 | 10 55 |
|          | 30 | 6 44  | 7 4   | 7 24  | 7 46  | 8 12  | 8 35  | 9 3   | 9 32  |
|          | 31 | 5 42  | 5 59  | 6 17  | 6 35  | 6 55  | 7 17  | 7 41  | 8 6   |
|          | 32 | 4 38  | 4 52  | 5 7   | 5 22  | 5 39  | 5 57  | 6 16  | 6 36  |



## GRADVS LATITVDINIS.

|    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51    | poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 0  | 42 39 | 44 33 | 46 36 | 48 48 | 51 11 | 53 48 | 56 42 | 59 59 | 63 48 |      |
| 1  | 41 43 | 43 35 | 45 36 | 47 46 | 50 7  | 52 41 | 55 33 | 58 47 | 62 34 |      |
| 2  | 40 47 | 42 37 | 44 36 | 46 44 | 49 2  | 51 35 | 54 24 | 57 36 | 61 20 |      |
| 3  | 39 51 | 41 39 | 43 36 | 45 41 | 47 58 | 50 28 | 53 15 | 56 24 | 60 5  |      |
| 4  | 38 55 | 40 41 | 42 35 | 44 39 | 46 53 | 49 21 | 52 5  | 55 12 | 58 51 |      |
| 5  | 37 57 | 39 42 | 41 35 | 43 36 | 45 48 | 48 13 | 50 55 | 54 0  | 57 36 |      |
| 6  | 37 2  | 38 43 | 40 34 | 42 33 | 44 43 | 47 6  | 49 45 | 52 47 | 56 21 |      |
| 7  | 36 5  | 37 44 | 39 33 | 41 30 | 43 37 | 45 58 | 48 35 | 51 34 | 55 5  |      |
| 8  | 35 7  | 36 45 | 38 31 | 40 26 | 42 31 | 44 49 | 47 24 | 50 21 | 53 48 |      |
| 9  | 34 9  | 35 46 | 37 29 | 39 22 | 41 24 | 43 40 | 46 12 | 49 6  | 52 31 |      |
| 10 | 33 11 | 34 45 | 36 27 | 38 17 | 40 17 | 42 30 | 45 0  | 47 51 | 51 13 |      |
| 11 | 32 12 | 33 44 | 35 23 | 37 11 | 39 9  | 41 20 | 43 47 | 46 35 | 49 55 |      |
| 12 | 31 13 | 32 42 | 34 20 | 36 5  | 38 0  | 40 9  | 42 33 | 45 19 | 48 35 |      |
| 13 | 30 13 | 31 40 | 33 15 | 34 58 | 36 51 | 38 57 | 41 18 | 44 1  | 47 14 |      |
| 14 | 29 12 | 30 37 | 32 10 | 33 50 | 35 41 | 37 43 | 40 2  | 42 42 | 45 52 |      |
| 15 | 28 11 | 29 33 | 31 4  | 32 41 | 34 29 | 36 29 | 38 45 | 41 22 | 44 29 |      |
| 16 | 27 8  | 28 28 | 29 56 | 31 32 | 33 17 | 35 14 | 37 26 | 40 0  | 43 4  |      |
| 17 | 26 5  | 27 23 | 28 48 | 30 21 | 32 3  | 33 57 | 36 6  | 38 37 | 41 37 |      |
| 18 | 25 1  | 26 16 | 27 38 | 29 8  | 30 48 | 32 39 | 34 45 | 37 12 | 40 9  |      |
| 19 | 23 55 | 25 8  | 26 27 | 27 55 | 29 31 | 31 19 | 33 22 | 35 45 | 38 38 |      |
| 20 | 22 49 | 23 58 | 25 15 | 26 40 | 28 13 | 29 57 | 31 57 | 34 17 | 37 5  |      |
| 21 | 21 40 | 12 47 | 24 2  | 25 23 | 26 53 | 28 34 | 30 30 | 32 45 | 35 30 |      |
| 22 | 20 31 | 21 35 | 22 46 | 24 4  | 25 31 | 27 8  | 29 0  | 31 12 | 33 52 |      |
| 23 | 19 20 | 20 21 | 21 29 | 22 43 | 24 6  | 25 40 | 27 28 | 29 36 | 32 11 |      |
| 24 | 18 7  | 19 5  | 20 10 | 21 21 | 22 40 | 24 10 | 25 54 | 27 56 | 30 27 |      |
| 25 | 16 52 | 17 47 | 18 48 | 19 56 | 21 11 | 22 36 | 24 16 | 26 13 | 28 38 |      |
| 26 | 15 36 | 16 27 | 17 25 | 18 28 | 19 39 | 21 0  | 22 34 | 24 27 | 26 46 |      |
| 27 | 14 17 | 15 4  | 15 58 | 16 57 | 18 4  | 19 20 | 20 51 | 22 36 | 24 48 |      |
| 28 | 12 55 | 13 39 | 14 29 | 15 23 | 16 25 | 17 36 | 19 0  | 20 40 | 22 46 |      |
| 29 | 11 31 | 12 11 | 12 56 | 13 46 | 14 43 | 15 48 | 17 5  | 18 38 | 20 36 |      |
| 30 | 10 4  | 10 40 | 11 20 | 12 5  | 12 56 | 13 55 | 15 5  | 16 30 | 18 19 |      |
| 31 | 8 34  | 9 5   | 9 40  | 10 19 | 11 4  | 11 56 | 12 58 | 14 15 | 15 54 |      |
| 32 | 7 3   | 7 27  | 7 56  | 8 29  | 9 7   | 9 51  | 10 45 | 11 51 | 13 18 |      |



# TABVLA POSITIONVM AD 54

| Elevatio | 52 |     |    | 53  |    |     | 54 |  |  |
|----------|----|-----|----|-----|----|-----|----|--|--|
|          | g  | g   | /  | g   | /  | g   | /  |  |  |
| Declina  | 32 | 121 | 32 | 130 | 38 | 149 | 19 |  |  |
|          | 31 | 118 | 41 | 127 | 30 | 145 | 48 |  |  |
| tio      | 30 | 116 | 4  | 124 | 38 | 142 | 37 |  |  |
|          | 29 | 113 | 37 | 121 | 58 | 139 | 44 |  |  |
| BORE     | 28 | 111 | 18 | 119 | 30 | 137 | 2  |  |  |
|          | 27 | 109 | 7  | 117 | 10 | 134 | 32 |  |  |
| A        | 26 | 107 | 3  | 114 | 57 | 132 | 10 |  |  |
|          | 25 | 105 | 4  | 112 | 51 | 129 | 59 |  |  |
| LIS      | 24 | 103 | 9  | 110 | 50 | 127 | 48 |  |  |
|          | 23 | 101 | 19 | 108 | 54 | 125 | 45 |  |  |
| supra    | 22 | 99  | 33 | 107 | 2  | 123 | 47 |  |  |
|          | 21 | 97  | 51 | 105 | 14 | 121 | 54 |  |  |
| terram   | 20 | 96  | 11 | 103 | 30 | 120 | 4  |  |  |
|          | 19 | 94  | 34 | 101 | 48 | 118 | 17 |  |  |
| BT       | 18 | 92  | 59 | 100 | 10 | 116 | 34 |  |  |
|          | 17 | 91  | 27 | 98  | 33 | 114 | 53 |  |  |
| AVS      | 16 | 89  | 57 | 96  | 59 | 113 | 15 |  |  |
|          | 15 | 88  | 29 | 95  | 27 | 111 | 38 |  |  |
| TRA      | 14 | 87  | 2  | 93  | 56 | 110 | 4  |  |  |
|          | 13 | 85  | 36 | 92  | 27 | 108 | 32 |  |  |
| LIS      | 12 | 84  | 12 | 91  | 0  | 107 | 0  |  |  |
|          | 11 | 82  | 49 | 89  | 34 | 105 | 31 |  |  |
| sub      | 10 | 81  | 28 | 88  | 9  | 104 | 3  |  |  |
|          | 9  | 80  | 7  | 86  | 45 | 102 | 35 |  |  |
| ter      | 8  | 78  | 47 | 85  | 22 | 101 | 9  |  |  |
|          | 7  | 77  | 27 | 84  | 0  | 99  | 44 |  |  |
| ra       | 6  | 76  | 9  | 82  | 38 | 98  | 19 |  |  |
|          | 5  | 74  | 51 | 81  | 17 | 96  | 55 |  |  |
|          | 4  | 73  | 33 | 79  | 56 | 95  | 31 |  |  |
|          | 3  | 72  | 16 | 78  | 36 | 94  | 8  |  |  |
|          | 2  | 70  | 59 | 77  | 16 | 92  | 45 |  |  |
|          | 1  | 69  | 42 | 75  | 57 | 91  | 23 |  |  |
|          | 0  | 68  | 25 | 74  | 37 | 90  | 0  |  |  |



## GRADVS LATITVDINIS.

|       | 52 |    |    | 53 |    |    | 54 |  |  |
|-------|----|----|----|----|----|----|----|--|--|
|       | g  | g  | /  | g  | /  | g  | /  |  |  |
| Decli | 0  | 68 | 25 | 74 | 37 | 90 | 0  |  |  |
|       | 1  | 67 | 8  | 73 | 17 | 88 | 37 |  |  |
| natio | 2  | 65 | 51 | 71 | 58 | 87 | 15 |  |  |
|       | 3  | 64 | 34 | 70 | 38 | 85 | 52 |  |  |
| AVS   | 4  | 63 | 17 | 69 | 18 | 84 | 29 |  |  |
|       | 5  | 61 | 59 | 67 | 57 | 83 | 5  |  |  |
| TRA   | 6  | 60 | 41 | 66 | 36 | 81 | 41 |  |  |
|       | 7  | 59 | 23 | 65 | 14 | 80 | 16 |  |  |
| LIS   | 8  | 58 | 3  | 63 | 52 | 78 | 51 |  |  |
|       | 9  | 56 | 43 | 62 | 29 | 77 | 25 |  |  |
| supra | 10 | 55 | 22 | 61 | 5  | 75 | 57 |  |  |
| ter   | 11 | 54 | 1  | 59 | 40 | 74 | 29 |  |  |
| ram   | 12 | 52 | 38 | 58 | 14 | 73 | 0  |  |  |
|       | 13 | 51 | 14 | 57 | 47 | 71 | 28 |  |  |
|       | 14 | 49 | 48 | 55 | 18 | 69 | 56 |  |  |
|       | 15 | 48 | 21 | 53 | 47 | 68 | 22 |  |  |
| ET    | 16 | 46 | 53 | 52 | 15 | 66 | 45 |  |  |
|       | 17 | 45 | 23 | 50 | 41 | 65 | 7  |  |  |
| BO    | 18 | 43 | 51 | 49 | 4  | 63 | 26 |  |  |
|       | 19 | 42 | 16 | 47 | 26 | 61 | 43 |  |  |
| REA   | 20 | 40 | 39 | 45 | 44 | 59 | 56 |  |  |
|       | 21 | 38 | 59 | 44 | 0  | 58 | 6  |  |  |
| LIS   | 22 | 37 | 17 | 42 | 12 | 56 | 13 |  |  |
| sub   | 23 | 35 | 31 | 40 | 20 | 54 | 15 |  |  |
|       | 24 | 33 | 41 | 38 | 24 | 52 | 12 |  |  |
| ter   | 25 | 31 | 46 | 36 | 23 | 50 | 1  |  |  |
| ra    | 26 | 29 | 47 | 34 | 17 | 47 | 50 |  |  |
|       | 27 | 27 | 43 | 32 | 4  | 45 | 28 |  |  |
|       | 28 | 25 | 32 | 29 | 44 | 42 | 58 |  |  |
|       | 29 | 23 | 13 | 27 | 16 | 40 | 16 |  |  |
|       | 30 | 20 | 46 | 24 | 36 | 37 | 23 |  |  |
|       | 31 | 18 | 9  | 21 | 44 | 34 | 12 |  |  |
|       | 32 | 15 | 18 | 18 | 36 | 30 | 41 |  |  |



# TABVLA POSITIONVM AD 57.

| Eleuatio | I  | 2    | 3    | 4    | 5    | 6    | 7    | 8    |
|----------|----|------|------|------|------|------|------|------|
|          | g  | g    | g    | g    | g    | g    | g    | g    |
| Declina  | 32 | 1 16 | 2 33 | 3 50 | 5 6  | 6 23 | 7 41 | 8 58 |
|          | 31 | 1 15 | 2 30 | 3 45 | 5 0  | 6 16 | 7 32 | 8 48 |
| tio      | 30 | 1 14 | 2 27 | 3 41 | 4 55 | 6 9  | 7 24 | 8 38 |
|          | 29 | 1 12 | 2 25 | 3 37 | 4 49 | 6 2  | 7 15 | 8 28 |
| BORR     | 28 | 1 11 | 2 22 | 3 33 | 4 44 | 5 55 | 7 7  | 8 19 |
|          | 27 | 1 10 | 2 19 | 3 29 | 4 39 | 5 48 | 6 59 | 8 9  |
| ALIS     | 26 | 1 8  | 2 17 | 3 25 | 4 33 | 5 42 | 6 51 | 8 0  |
|          | 25 | 1 7  | 2 14 | 3 21 | 4 28 | 5 35 | 6 44 | 7 51 |
| supra    | 24 | 1 6  | 2 11 | 3 17 | 4 23 | 5 29 | 6 36 | 7 42 |
|          | 23 | 1 4  | 2 9  | 3 14 | 4 18 | 5 23 | 6 28 | 7 33 |
| terram   | 22 | 1 3  | 2 7  | 3 10 | 4 13 | 5 17 | 6 21 | 7 25 |
|          | 21 | 1 2  | 2 4  | 3 6  | 4 8  | 5 10 | 6 14 | 7 16 |
|          | 20 | 1 1  | 2 2  | 3 3  | 4 3  | 5 4  | 6 7  | 7 8  |
|          | 19 | 1 0  | 1 59 | 2 59 | 3 59 | 4 59 | 5 59 | 6 59 |
| ET       | 18 | 0 58 | 1 57 | 2 56 | 3 54 | 4 53 | 5 52 | 6 51 |
|          | 17 | 0 57 | 1 55 | 2 52 | 3 50 | 4 47 | 5 45 | 6 43 |
| AVS      | 16 | 0 56 | 1 52 | 2 49 | 3 45 | 4 41 | 5 39 | 6 35 |
|          | 15 | 0 55 | 1 50 | 2 45 | 3 40 | 4 36 | 5 32 | 6 27 |
| TRA      | 14 | 0 54 | 1 48 | 2 42 | 3 36 | 4 30 | 5 25 | 6 19 |
|          | 13 | 0 53 | 1 46 | 2 39 | 3 32 | 4 24 | 5 18 | 6 11 |
| LIS      | 12 | 0 52 | 1 43 | 2 35 | 3 27 | 4 19 | 5 12 | 6 4  |
|          | 11 | 0 51 | 1 41 | 2 32 | 3 23 | 4 13 | 5 5  | 5 56 |
| sub      | 10 | 0 50 | 1 39 | 2 29 | 3 18 | 4 8  | 4 59 | 5 48 |
|          | 9  | 0 48 | 1 37 | 2 26 | 3 14 | 4 3  | 4 52 | 5 41 |
| ter      | 8  | 0 47 | 1 35 | 2 22 | 3 10 | 3 57 | 4 46 | 5 33 |
|          | 7  | 0 46 | 1 33 | 2 19 | 3 6  | 3 52 | 4 39 | 5 26 |
| ra       | 6  | 0 45 | 1 31 | 2 16 | 3 1  | 3 47 | 4 33 | 5 18 |
|          | 5  | 0 44 | 1 28 | 2 13 | 2 57 | 3 41 | 4 27 | 5 11 |
|          | 4  | 0 43 | 1 26 | 2 10 | 2 53 | 3 36 | 4 20 | 5 4  |
|          | 3  | 0 42 | 1 24 | 2 6  | 2 49 | 3 31 | 4 14 | 4 56 |
|          | 2  | 0 41 | 1 22 | 2 3  | 2 44 | 3 25 | 4 8  | 4 49 |
|          | 1  | 0 40 | 1 20 | 2 0  | 2 40 | 3 20 | 4 1  | 4 41 |
|          | 0  | 0 39 | 1 18 | 1 57 | 2 36 | 3 15 | 3 55 | 4 34 |



## GRADVS LATITVDINIS.

|    | 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| ̄  | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄    |
| 32 | 11 35 | 12 55 | 14 14 | 15 34 | 16 55 | 18 17 | 19 39 | 21 3  | 22 28 |      |
| 31 | 11 22 | 12 40 | 13 57 | 15 16 | 16 36 | 17 56 | 19 17 | 20 39 | 22 2  |      |
| 30 | 11 9  | 12 26 | 13 42 | 14 59 | 16 17 | 17 36 | 18 55 | 20 16 | 21 37 |      |
| 29 | 10 56 | 12 12 | 13 26 | 14 42 | 15 58 | 17 16 | 18 33 | 19 53 | 21 12 |      |
| 28 | 10 44 | 11 58 | 13 11 | 14 25 | 15 40 | 16 56 | 18 12 | 19 30 | 20 48 |      |
| 27 | 10 32 | 11 44 | 12 56 | 14 9  | 15 22 | 16 37 | 17 52 | 19 8  | 20 25 |      |
| 26 | 10 20 | 11 31 | 12 41 | 13 53 | 15 5  | 16 18 | 17 32 | 18 46 | 20 2  |      |
| 25 | 10 8  | 11 18 | 12 27 | 13 37 | 14 48 | 16 0  | 17 12 | 18 25 | 19 39 |      |
| 24 | 9 57  | 11 5  | 12 13 | 13 22 | 14 31 | 15 41 | 16 52 | 18 4  | 19 16 |      |
| 23 | 9 45  | 10 53 | 11 59 | 13 7  | 14 14 | 15 23 | 16 33 | 17 43 | 18 54 |      |
| 22 | 9 34  | 10 40 | 11 45 | 12 52 | 13 58 | 15 6  | 16 14 | 17 23 | 18 33 |      |
| 21 | 9 23  | 10 28 | 11 32 | 12 37 | 13 42 | 14 49 | 15 55 | 17 3  | 18 11 |      |
| 20 | 9 12  | 10 16 | 11 18 | 12 22 | 13 26 | 14 31 | 15 37 | 16 43 | 17 50 |      |
| 19 | 9 2   | 10 4  | 11 5  | 12 8  | 13 11 | 14 14 | 15 19 | 16 24 | 17 30 |      |
| 18 | 8 51  | 9 52  | 10 52 | 11 54 | 12 55 | 13 58 | 15 1  | 16 5  | 17 9  |      |
| 17 | 8 41  | 9 40  | 10 39 | 11 40 | 12 40 | 13 41 | 14 43 | 15 46 | 16 49 |      |
| 16 | 8 30  | 9 29  | 10 27 | 11 26 | 12 25 | 13 25 | 14 25 | 15 27 | 16 29 |      |
| 15 | 8 20  | 9 17  | 10 14 | 11 12 | 12 10 | 13 9  | 14 8  | 15 8  | 16 9  |      |
| 14 | 8 10  | 9 6   | 10 2  | 10 58 | 11 51 | 12 53 | 13 51 | 14 50 | 15 49 |      |
| 13 | 8 0   | 8 55  | 9 49  | 10 45 | 11 40 | 12 37 | 13 34 | 14 32 | 15 30 |      |
| 12 | 7 50  | 8 44  | 9 37  | 10 31 | 11 26 | 12 21 | 13 17 | 14 14 | 15 11 |      |
| 11 | 7 40  | 8 33  | 9 25  | 10 18 | 11 11 | 12 6  | 13 0  | 13 56 | 14 51 |      |
| 10 | 7 30  | 8 22  | 9 13  | 10 5  | 10 57 | 11 50 | 12 43 | 13 38 | 14 32 |      |
| 9  | 7 20  | 8 11  | 9 1   | 9 52  | 10 43 | 11 35 | 12 27 | 13 20 | 14 14 |      |
| 8  | 7 10  | 8 0   | 8 49  | 9 39  | 10 29 | 11 19 | 12 10 | 13 3  | 13 55 |      |
| 7  | 7 1   | 7 49  | 8 37  | 9 26  | 10 14 | 11 4  | 11 54 | 12 45 | 13 36 |      |
| 6  | 6 51  | 7 39  | 8 25  | 9 13  | 10 0  | 10 49 | 11 38 | 12 28 | 13 17 |      |
| 5  | 6 42  | 7 28  | 8 13  | 9 0   | 9 46  | 10 34 | 11 22 | 12 10 | 12 59 |      |
| 4  | 6 32  | 7 17  | 8 2   | 8 47  | 9 33  | 10 19 | 11 5  | 11 53 | 12 41 |      |
| 3  | 6 23  | 7 7   | 7 50  | 8 34  | 9 19  | 10 4  | 10 49 | 11 36 | 12 22 |      |
| 2  | 6 13  | 6 56  | 7 38  | 8 21  | 9 5   | 9 49  | 10 33 | 11 18 | 12 4  |      |
| 1  | 6 3   | 6 46  | 7 27  | 8 9   | 8 51  | 9 34  | 10 17 | 11 1  | 11 45 |      |
| 0  | 5 54  | 6 35  | 7 15  | 7 56  | 8 37  | 9 19  | 10 1  | 10 44 | 11 27 |      |



# TABVLA POSITIONVM AD 57.

| Eleuatio | I     | 2    | 3    | 4    | 5    | 6    | 7    | 8    |
|----------|-------|------|------|------|------|------|------|------|
|          | g     | g    | g    | g    | g    | g    | g    | g    |
| Decli    | 0 39  | 1 18 | 1 57 | 2 36 | 3 15 | 3 55 | 4 34 | 5 14 |
|          | 1 38  | 1 16 | 1 54 | 2 32 | 3 10 | 3 49 | 4 27 | 5 6  |
| natio    | 2 37  | 1 14 | 1 51 | 2 28 | 3 5  | 3 42 | 4 19 | 4 57 |
|          | 3 36  | 1 12 | 1 48 | 2 23 | 2 59 | 3 36 | 4 12 | 4 49 |
| AVS      | 4 35  | 1 10 | 1 44 | 2 19 | 2 54 | 3 30 | 4 4  | 4 40 |
|          | 5 34  | 1 8  | 1 41 | 2 15 | 2 49 | 3 23 | 3 57 | 4 32 |
| TRA      | 6 33  | 1 5  | 1 38 | 2 11 | 2 43 | 3 17 | 3 50 | 4 23 |
|          | 7 32  | 1 3  | 1 35 | 2 6  | 2 38 | 3 11 | 3 42 | 4 15 |
| LIS      | 8 31  | 1 1  | 1 32 | 2 2  | 2 33 | 3 4  | 3 35 | 4 6  |
|          | 9 30  | 0 59 | 1 28 | 1 58 | 2 27 | 2 58 | 3 27 | 3 58 |
| supra    | 10 28 | 0 57 | 1 25 | 1 54 | 2 22 | 2 51 | 3 20 | 3 49 |
|          | 11 27 | 0 55 | 1 22 | 1 49 | 2 17 | 2 45 | 3 12 | 3 40 |
| terram   | 12 26 | 0 53 | 1 19 | 1 45 | 2 11 | 2 38 | 3 4  | 3 31 |
|          | 13 25 | 0 50 | 1 15 | 1 40 | 2 6  | 2 32 | 2 57 | 3 22 |
|          | 14 24 | 0 48 | 1 12 | 1 36 | 2 0  | 2 25 | 2 49 | 3 13 |
|          | 15 23 | 0 46 | 1 9  | 1 32 | 1 54 | 2 18 | 2 41 | 3 4  |
| ET       | 16 22 | 0 44 | 1 5  | 1 27 | 1 49 | 2 11 | 2 33 | 2 55 |
|          | 17 21 | 0 41 | 1 2  | 1 22 | 1 43 | 2 5  | 2 25 | 2 46 |
| BORE     | 18 20 | 0 39 | 0 58 | 1 18 | 1 37 | 1 58 | 2 17 | 2 37 |
|          | 19 18 | 0 37 | 0 55 | 1 13 | 1 31 | 1 51 | 2 9  | 2 28 |
| ALIS     | 20 17 | 0 34 | 0 51 | 1 9  | 1 26 | 1 43 | 2 0  | 2 18 |
|          | 21 16 | 0 32 | 0 48 | 1 4  | 1 20 | 1 36 | 1 52 | 2 8  |
| sub      | 22 15 | 0 29 | 0 44 | 0 59 | 1 13 | 1 29 | 1 43 | 1 59 |
|          | 23 14 | 0 27 | 0 40 | 0 54 | 1 7  | 1 22 | 1 35 | 1 49 |
| terra    | 24 12 | 0 25 | 0 37 | 0 49 | 1 1  | 1 14 | 1 26 | 1 39 |
|          | 25 11 | 0 22 | 0 33 | 0 44 | 0 55 | 1 6  | 1 17 | 1 29 |
|          | 26 10 | 0 19 | 0 29 | 0 39 | 0 48 | 0 59 | 1 8  | 1 18 |
|          | 27 8  | 0 17 | 0 25 | 0 33 | 0 42 | 0 51 | 0 59 | 1 8  |
|          | 28 7  | 0 14 | 0 21 | 0 28 | 0 35 | 0 43 | 0 49 | 0 57 |
|          | 29 6  | 0 11 | 0 17 | 0 23 | 0 28 | 0 35 | 0 40 | 0 46 |
|          | 30 4  | 0 9  | 0 13 | 0 17 | 0 21 | 0 26 | 0 30 | 0 35 |
|          | 31 3  | 0 6  | 0 9  | 0 12 | 0 14 | 0 18 | 0 20 | 0 23 |
|          | 32 2  | 0 3  | 0 4  | 0 6  | 0 7  | 0 9  | 0 10 | 0 12 |



## GRADVS LATITVDINIS.

|    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16    | 17    | poli |
|----|------|------|------|------|------|------|------|-------|-------|------|
| 5  | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5     | 5     |      |
| 0  | 5 54 | 6 35 | 7 15 | 7 56 | 8 37 | 9 19 | 10 1 | 10 44 | 11 27 |      |
| 1  | 5 45 | 6 24 | 7 3  | 7 43 | 8 23 | 9 4  | 9 45 | 10 27 | 11 9  |      |
| 2  | 5 35 | 6 14 | 6 52 | 7 31 | 8 9  | 8 49 | 9 29 | 10 10 | 10 50 |      |
| 3  | 5 25 | 6 3  | 6 40 | 7 18 | 7 55 | 8 34 | 9 13 | 9 52  | 10 32 |      |
| 4  | 5 16 | 5 53 | 6 28 | 7 5  | 7 41 | 8 19 | 8 57 | 9 35  | 10 13 |      |
| 5  | 5 6  | 5 42 | 6 17 | 6 52 | 7 28 | 8 4  | 8 40 | 9 18  | 9 55  |      |
| 6  | 4 57 | 5 31 | 6 5  | 6 39 | 7 14 | 7 49 | 8 24 | 9 0   | 9 37  |      |
| 7  | 4 47 | 5 21 | 5 53 | 6 26 | 7 0  | 7 34 | 8 8  | 8 43  | 9 18  |      |
| 8  | 4 38 | 5 10 | 5 41 | 6 13 | 6 45 | 7 19 | 7 52 | 8 25  | 8 59  |      |
| 9  | 4 28 | 4 59 | 5 29 | 6 0  | 6 31 | 7 3  | 7 35 | 8 8   | 8 40  |      |
| 10 | 4 18 | 4 48 | 5 17 | 5 47 | 6 17 | 6 48 | 7 19 | 7 50  | 8 22  |      |
| 11 | 4 8  | 4 37 | 5 5  | 5 34 | 6 3  | 6 32 | 7 2  | 7 32  | 8 3   |      |
| 12 | 3 58 | 4 26 | 4 53 | 5 21 | 5 48 | 6 17 | 6 45 | 7 14  | 7 43  |      |
| 13 | 3 48 | 4 15 | 4 41 | 5 7  | 5 34 | 6 1  | 6 28 | 6 56  | 7 24  |      |
| 14 | 3 38 | 4 4  | 4 28 | 4 54 | 5 19 | 5 45 | 6 11 | 6 38  | 7 5   |      |
| 15 | 3 28 | 3 53 | 4 16 | 4 40 | 5 4  | 5 29 | 5 54 | 6 20  | 6 45  |      |
| 16 | 3 18 | 3 41 | 4 3  | 4 26 | 4 49 | 5 13 | 5 37 | 6 1   | 6 25  |      |
| 17 | 3 7  | 3 30 | 3 51 | 4 12 | 4 34 | 4 57 | 5 19 | 5 42  | 6 5   |      |
| 18 | 2 57 | 3 18 | 3 38 | 3 58 | 4 19 | 4 40 | 5 1  | 5 23  | 5 45  |      |
| 19 | 2 46 | 3 6  | 3 25 | 3 44 | 4 3  | 4 24 | 4 43 | 5 4   | 5 24  |      |
| 20 | 2 36 | 2 54 | 3 12 | 3 30 | 3 48 | 4 7  | 4 25 | 4 45  | 5 4   |      |
| 21 | 2 25 | 2 42 | 2 58 | 3 15 | 3 32 | 3 49 | 4 7  | 4 25  | 4 43  |      |
| 22 | 2 14 | 2 30 | 2 45 | 3 0  | 3 16 | 3 32 | 3 48 | 4 5   | 4 21  |      |
| 23 | 2 3  | 2 17 | 2 31 | 2 45 | 3 0  | 3 15 | 3 29 | 3 45  | 4 0   |      |
| 24 | 1 51 | 2 5  | 2 17 | 2 30 | 2 43 | 2 57 | 3 10 | 3 24  | 3 38  |      |
| 25 | 1 40 | 1 52 | 2 3  | 2 15 | 2 26 | 2 38 | 2 50 | 3 3   | 3 15  |      |
| 26 | 1 28 | 1 39 | 1 49 | 1 59 | 2 9  | 2 20 | 2 30 | 2 42  | 2 52  |      |
| 27 | 1 16 | 1 26 | 1 34 | 1 43 | 1 52 | 2 1  | 2 10 | 2 20  | 2 29  |      |
| 28 | 1 4  | 1 12 | 1 19 | 1 27 | 1 34 | 1 43 | 1 50 | 1 58  | 2 6   |      |
| 29 | 0 52 | 0 58 | 1 4  | 1 10 | 1 16 | 1 23 | 1 29 | 1 35  | 1 42  |      |
| 30 | 0 39 | 0 44 | 0 48 | 0 53 | 0 57 | 1 2  | 1 7  | 1 12  | 1 17  |      |
| 31 | 0 26 | 0 30 | 0 33 | 0 36 | 0 39 | 0 43 | 0 45 | 0 49  | 0 52  |      |
| 32 | 0 13 | 0 15 | 0 16 | 0 18 | 0 19 | 0 21 | 0 23 | 0 25  | 0 26  |      |



# TABVLA POSITIONVM AD 57.

| Eleuatio | 18       | 19             | 20             | 21             | 22             | 23             | 24             | 25             |                |
|----------|----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|          | g        | g              | g              | g              | g              | g              | g              | g              |                |
| Decli    | 32<br>31 | 23 54<br>23 27 | 25 20<br>24 51 | 26 49<br>26 18 | 28 19<br>27 46 | 29 50<br>29 16 | 31 23<br>30 47 | 32 57<br>32 19 | 34 34<br>33 54 |
| natio    | 30<br>29 | 23 0<br>22 34  | 24 23<br>23 55 | 25 48<br>25 18 | 27 14<br>26 43 | 28 42<br>28 9  | 30 11<br>29 37 | 31 42<br>31 5  | 33 15<br>32 37 |
| BORE     | 28<br>27 | 22 8<br>21 43  | 23 28<br>23 1  | 24 49<br>24 21 | 26 13<br>25 43 | 27 37<br>27 6  | 29 3<br>28 29  | 29 30<br>29 55 | 31 59<br>31 23 |
| ALIS     | 26<br>25 | 21 18<br>20 54 | 22 35<br>22 9  | 23 54<br>23 26 | 25 13<br>24 45 | 26 35<br>26 5  | 27 57<br>27 25 | 29 21<br>28 47 | 30 47<br>30 12 |
|          | 24<br>23 | 20 30<br>20 7  | 21 44<br>21 19 | 22 59<br>22 33 | 24 16<br>23 48 | 25 35<br>25 6  | 26 54<br>26 23 | 28 14<br>27 42 | 29 37<br>29 3  |
| supra    | 22<br>21 | 19 44<br>19 21 | 20 55<br>20 31 | 22 7<br>21 42  | 23 21<br>22 54 | 24 37<br>24 8  | 25 53<br>25 23 | 27 10<br>26 38 | 28 30<br>27 57 |
| terram   | 20<br>19 | 18 58<br>18 36 | 20 7<br>19 44  | 21 17<br>20 42 | 22 28<br>22 2  | 23 40<br>23 13 | 24 53<br>24 24 | 26 7<br>25 37  | 27 24<br>26 52 |
| ET       | 18<br>17 | 18 15<br>17 53 | 19 20<br>18 57 | 20 27<br>20 3  | 21 36<br>21 10 | 22 46<br>22 19 | 23 56<br>23 27 | 25 7<br>24 37  | 26 21<br>25 50 |
| AVS      | 16<br>15 | 17 32<br>17 11 | 18 35<br>18 13 | 19 39<br>19 16 | 20 45<br>20 20 | 21 43<br>21 26 | 22 59<br>22 32 | 24 8<br>23 39  | 25 19<br>24 49 |
| TRA      | 14<br>13 | 16 50<br>16 29 | 17 50<br>17 29 | 18 52<br>18 29 | 19 56<br>19 31 | 21 0<br>20 34  | 22 5<br>21 38  | 23 10<br>22 42 | 24 19<br>23 49 |
| LIS      | 12<br>11 | 16 9<br>15 48  | 17 7<br>16 45  | 18 6<br>17 43  | 19 7<br>18 43  | 20 9<br>19 43  | 21 11<br>20 44 | 22 14<br>21 46 | 23 19<br>22 50 |
| sub      | 10<br>9  | 15 28<br>15 8  | 16 24<br>16 3  | 17 21<br>16 58 | 18 19<br>17 55 | 19 18<br>18 53 | 20 18<br>19 51 | 21 18<br>20 51 | 22 21<br>21 52 |
| terra    | 8<br>7   | 14 48<br>14 28 | 15 41<br>15 20 | 16 36<br>16 14 | 17 32<br>17 8  | 18 28<br>18 4  | 19 25<br>18 59 | 20 23<br>19 56 | 21 23<br>20 55 |
|          | 6<br>5   | 14 8<br>13 49  | 14 59<br>14 39 | 15 52<br>15 29 | 16 45<br>16 21 | 17 39<br>17 15 | 18 33<br>18 8  | 19 29<br>19 2  | 20 27<br>19 58 |
|          | 4<br>3   | 13 29<br>13 10 | 14 18<br>13 57 | 15 7<br>14 46  | 15 58<br>15 35 | 16 50<br>16 21 | 17 42<br>17 17 | 18 35<br>18 8  | 19 30<br>19 2  |
|          | 2<br>1   | 12 50<br>12 30 | 13 36<br>13 16 | 14 24<br>14 2  | 15 12<br>14 49 | 16 2<br>15 37  | 16 51<br>16 25 | 17 41<br>17 15 | 18 34<br>18 6  |
|          | 0        | 12 11          | 12 55          | 13 40          | 14 26          | 15 13          | 16 0           | 16 48          | 17 38          |



## GRADVS LATITVDINIS.

|    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | pol |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| 32 | 36 13 | 37 53 | 39 36 | 41 22 | 43 10 | 45 1  | 46 55 | 48 53 | 50 55 |     |
| 31 | 35 30 | 37 9  | 38 50 | 40 33 | 42 19 | 44 8  | 45 59 | 47 55 | 49 54 |     |
| 30 | 34 49 | 36 25 | 38 5  | 39 46 | 41 29 | 43 16 | 45 5  | 46 58 | 48 54 |     |
| 29 | 34 9  | 35 43 | 37 20 | 39 0  | 40 41 | 42 25 | 44 12 | 46 3  | 47 56 |     |
| 28 | 33 30 | 35 2  | 36 37 | 38 14 | 39 54 | 41 36 | 43 20 | 45 9  | 47 0  |     |
| 27 | 32 51 | 34 22 | 35 55 | 37 30 | 39 7  | 40 48 | 42 30 | 44 16 | 46 5  |     |
| 26 | 32 14 | 33 42 | 35 14 | 36 47 | 38 22 | 40 0  | 41 41 | 43 25 | 45 11 |     |
| 25 | 31 37 | 33 4  | 34 33 | 36 5  | 37 38 | 39 14 | 40 52 | 42 35 | 44 19 |     |
| 24 | 31 1  | 32 26 | 33 52 | 35 23 | 36 55 | 38 29 | 40 5  | 41 45 | 43 28 |     |
| 23 | 30 25 | 31 48 | 33 14 | 34 43 | 36 12 | 37 45 | 39 19 | 40 57 | 42 37 |     |
| 22 | 29 50 | 31 12 | 32 36 | 34 2  | 35 30 | 37 1  | 38 33 | 40 10 | 41 48 |     |
| 21 | 29 15 | 30 36 | 31 58 | 33 23 | 34 49 | 36 18 | 37 49 | 39 23 | 40 59 |     |
| 20 | 28 42 | 30 0  | 31 21 | 32 44 | 34 9  | 35 36 | 37 5  | 38 37 | 40 12 |     |
| 19 | 28 8  | 29 25 | 30 45 | 32 6  | 33 29 | 34 54 | 36 21 | 37 52 | 39 25 |     |
| 18 | 27 35 | 28 51 | 30 9  | 31 29 | 32 50 | 34 14 | 35 39 | 37 8  | 38 39 |     |
| 17 | 27 3  | 28 17 | 29 33 | 30 51 | 32 11 | 33 33 | 34 57 | 36 24 | 37 53 |     |
| 16 | 26 31 | 27 43 | 28 58 | 30 14 | 31 33 | 32 53 | 34 15 | 35 41 | 37 8  |     |
| 15 | 25 59 | 27 10 | 28 23 | 29 38 | 30 55 | 32 14 | 33 34 | 34 58 | 36 24 |     |
| 14 | 25 27 | 26 37 | 27 49 | 29 2  | 30 18 | 31 35 | 32 54 | 34 16 | 35 40 |     |
| 13 | 24 56 | 26 4  | 27 15 | 28 27 | 29 41 | 30 56 | 32 14 | 33 34 | 34 57 |     |
| 12 | 24 25 | 25 32 | 26 41 | 27 52 | 29 4  | 30 18 | 31 34 | 32 53 | 34 14 |     |
| 11 | 23 54 | 25 0  | 26 8  | 27 17 | 28 28 | 29 40 | 30 55 | 32 12 | 33 31 |     |
| 10 | 23 24 | 24 28 | 25 35 | 26 43 | 27 52 | 29 3  | 30 16 | 31 32 | 32 49 |     |
| 9  | 22 54 | 23 57 | 25 2  | 26 8  | 27 16 | 28 26 | 29 37 | 30 51 | 32 7  |     |
| 8  | 22 24 | 23 25 | 24 29 | 25 34 | 26 40 | 27 49 | 28 58 | 30 11 | 31 25 |     |
| 7  | 21 54 | 22 54 | 23 57 | 25 0  | 26 5  | 27 12 | 28 20 | 29 31 | 30 44 |     |
| 6  | 21 24 | 22 33 | 23 24 | 24 26 | 25 30 | 26 35 | 27 42 | 28 52 | 30 3  |     |
| 5  | 20 55 | 21 52 | 22 52 | 23 53 | 24 55 | 25 59 | 27 4  | 28 12 | 29 22 |     |
| 4  | 20 25 | 21 22 | 22 20 | 23 19 | 24 20 | 25 22 | 26 26 | 27 33 | 28 41 |     |
| 3  | 19 56 | 20 51 | 21 48 | 22 46 | 23 45 | 24 46 | 25 49 | 26 54 | 28 1  |     |
| 2  | 19 27 | 20 20 | 21 16 | 22 13 | 23 10 | 24 10 | 25 11 | 26 15 | 27 20 |     |
| 1  | 18 57 | 19 50 | 20 44 | 21 39 | 22 36 | 23 34 | 24 33 | 25 36 | 26 39 |     |
| 0  | 18 28 | 19 19 | 20 12 | 21 6  | 22 1  | 22 58 | 23 56 | 24 57 | 25 59 |     |



# TABVLA POSITIONVM AD 57.

| Eleuatio |    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    |
|----------|----|-------|-------|-------|-------|-------|-------|-------|-------|
|          |    | g     | g     | g     | g     | g     | g     | g     | g     |
| Decli    | 0  | 12 11 | 12 55 | 13 40 | 14 26 | 15 13 | 16 0  | 16 48 | 17 38 |
|          | 1  | 11 52 | 12 34 | 13 18 | 14 3  | 14 49 | 15 35 | 16 21 | 17 10 |
| natio    | 2  | 11 32 | 12 14 | 12 56 | 13 40 | 14 24 | 15 9  | 15 55 | 16 42 |
|          | 3  | 11 12 | 11 53 | 12 34 | 13 17 | 14 0  | 14 43 | 15 28 | 16 14 |
| AVS      | 4  | 10 53 | 11 32 | 12 13 | 12 54 | 13 36 | 14 18 | 15 1  | 15 46 |
|          | 5  | 10 33 | 11 11 | 11 51 | 12 31 | 13 11 | 13 52 | 14 34 | 15 18 |
| TRA      | 6  | 10 14 | 10 51 | 11 28 | 12 7  | 12 47 | 13 27 | 14 7  | 14 49 |
|          | 7  | 9 54  | 10 30 | 11 6  | 11 44 | 12 22 | 13 1  | 13 40 | 14 21 |
| LIS      | 8  | 9 34  | 10 9  | 10 44 | 11 20 | 11 58 | 12 35 | 13 13 | 13 53 |
|          | 9  | 9 14  | 9 47  | 10 22 | 10 57 | 11 33 | 12 9  | 12 45 | 13 24 |
| supra    | 10 | 8 54  | 9 26  | 9 59  | 10 33 | 11 8  | 11 42 | 12 18 | 12 55 |
|          | 11 | 8 34  | 9 5   | 9 37  | 10 9  | 10 43 | 11 16 | 11 50 | 12 26 |
| terram   | 12 | 8 13  | 8 43  | 9 14  | 9 45  | 10 17 | 10 49 | 11 22 | 11 57 |
|          | 13 | 7 53  | 8 21  | 8 51  | 9 21  | 9 52  | 10 22 | 10 54 | 11 27 |
|          | 14 | 7 32  | 8 0   | 8 28  | 8 56  | 9 26  | 9 55  | 10 26 | 10 57 |
|          | 15 | 7 11  | 7 37  | 8 4   | 8 34  | 9 0   | 9 28  | 9 57  | 10 27 |
| ET       | 16 | 6 50  | 7 15  | 7 41  | 8 7   | 8 34  | 9 1   | 9 28  | 9 57  |
|          | 17 | 6 29  | 6 53  | 7 17  | 7 42  | 8 7   | 8 33  | 8 59  | 9 26  |
| BO       | 18 | 6 7   | 6 30  | 6 53  | 7 16  | 7 40  | 8 4   | 8 29  | 8 55  |
|          | 19 | 5 46  | 6 6   | 6 28  | 6 50  | 7 13  | 7 36  | 7 59  | 8 24  |
| REA      | 20 | 5 24  | 5 43  | 6 3   | 6 24  | 6 46  | 7 7   | 7 29  | 7 52  |
|          | 21 | 5 1   | 5 19  | 5 38  | 5 58  | 6 18  | 6 37  | 6 58  | 7 19  |
| LIS      | 22 | 4 38  | 4 55  | 5 13  | 5 31  | 5 49  | 6 7   | 6 26  | 6 46  |
|          | 23 | 4 15  | 4 31  | 4 47  | 5 4   | 5 20  | 5 37  | 5 54  | 6 13  |
| sub      | 24 | 3 52  | 4 6   | 4 21  | 4 36  | 4 51  | 5 6   | 5 22  | 5 39  |
|          | 25 | 3 28  | 3 41  | 3 54  | 4 7   | 4 21  | 4 35  | 4 49  | 5 4   |
| terra    | 26 | 3 4   | 3 15  | 3 26  | 3 39  | 3 51  | 4 3   | 4 15  | 4 29  |
|          | 27 | 2 39  | 2 49  | 2 59  | 3 9   | 3 20  | 3 31  | 3 41  | 3 53  |
|          | 28 | 2 14  | 2 22  | 2 31  | 2 39  | 2 49  | 2 57  | 3 6   | 3 17  |
|          | 29 | 1 48  | 1 55  | 2 2   | 2 9   | 2 17  | 2 23  | 2 31  | 2 39  |
|          | 30 | 1 22  | 1 27  | 1 32  | 1 38  | 1 44  | 1 49  | 1 54  | 2 1   |
|          | 31 | 0 55  | 0 59  | 1 2   | 1 6   | 1 10  | 1 13  | 1 17  | 1 22  |
|          | 32 | 0 28  | 0 30  | 0 31  | 0 33  | 0 36  | 0 37  | 0 39  | 0 42  |



GRADVS LATITVDINIS.

|    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ̄  | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     |
| 0  | 18 28 | 19 19 | 20 12 | 21 6  | 22 1  | 22 58 | 23 56 | 24 57 | 25 59 |
| 1  | 17 59 | 18 48 | 19 40 | 20 33 | 21 26 | 22 22 | 23 19 | 24 18 | 25 19 |
| 2  | 17 29 | 18 18 | 19 8  | 19 59 | 20 52 | 21 46 | 22 41 | 23 39 | 24 38 |
| 3  | 17 0  | 17 47 | 18 36 | 19 26 | 20 17 | 21 10 | 22 3  | 23 0  | 23 57 |
| 4  | 16 31 | 17 16 | 18 4  | 18 53 | 19 42 | 20 34 | 21 26 | 22 21 | 23 17 |
| 5  | 16 1  | 16 46 | 17 32 | 18 19 | 19 7  | 19 57 | 20 48 | 21 42 | 22 36 |
| 6  | 15 32 | 16 15 | 17 0  | 17 46 | 18 32 | 19 21 | 20 10 | 21 2  | 21 55 |
| 7  | 15 2  | 15 44 | 16 27 | 17 12 | 17 57 | 18 44 | 19 32 | 20 23 | 21 14 |
| 8  | 14 32 | 15 13 | 15 55 | 16 38 | 17 22 | 18 7  | 18 54 | 19 43 | 20 33 |
| 9  | 14 2  | 14 41 | 15 22 | 16 4  | 16 46 | 17 30 | 18 15 | 19 3  | 19 51 |
| 10 | 13 32 | 14 10 | 14 49 | 15 29 | 16 10 | 16 53 | 17 36 | 18 22 | 19 5  |
| 11 | 13 2  | 13 38 | 14 16 | 14 55 | 15 34 | 16 16 | 16 57 | 17 12 | 18 27 |
| 12 | 12 31 | 13 6  | 13 43 | 14 20 | 14 58 | 15 38 | 16 18 | 17 1  | 17 44 |
| 13 | 12 0  | 12 34 | 13 9  | 13 45 | 14 21 | 15 0  | 15 38 | 16 20 | 17 1  |
| 14 | 11 29 | 12 1  | 12 35 | 13 10 | 13 44 | 14 21 | 14 58 | 15 38 | 16 18 |
| 15 | 10 57 | 11 28 | 12 1  | 12 34 | 13 7  | 13 42 | 14 18 | 14 56 | 15 34 |
| 16 | 10 25 | 10 55 | 11 26 | 11 58 | 12 29 | 13 3  | 13 37 | 14 13 | 14 50 |
| 17 | 9 53  | 10 21 | 10 51 | 11 21 | 11 51 | 12 23 | 12 55 | 13 30 | 14 5  |
| 18 | 9 21  | 9 47  | 10 15 | 10 43 | 11 12 | 11 42 | 12 13 | 12 46 | 13 19 |
| 19 | 8 48  | 9 13  | 9 39  | 10 6  | 10 33 | 11 2  | 11 31 | 12 2  | 12 33 |
| 20 | 8 14  | 8 38  | 9 3   | 9 28  | 9 53  | 10 20 | 10 47 | 11 17 | 11 46 |
| 21 | 7 41  | 8 2   | 8 26  | 8 49  | 9 13  | 9 38  | 10 3  | 10 31 | 10 59 |
| 22 | 7 6   | 7 26  | 7 48  | 8 10  | 8 32  | 8 55  | 9 19  | 9 44  | 10 10 |
| 23 | 6 31  | 6 50  | 7 9   | 7 29  | 7 50  | 8 11  | 8 33  | 8 57  | 9 21  |
| 24 | 5 55  | 6 12  | 6 30  | 6 49  | 7 6   | 7 27  | 7 47  | 8 9   | 8 30  |
| 25 | 5 19  | 5 34  | 5 51  | 6 7   | 6 24  | 6 42  | 7 0   | 7 19  | 7 39  |
| 26 | 4 42  | 4 46  | 5 10  | 5 25  | 5 40  | 5 54  | 6 11  | 6 29  | 6 47  |
| 27 | 4 5   | 4 16  | 4 29  | 4 42  | 4 55  | 5 8   | 5 22  | 5 38  | 5 53  |
| 28 | 3 26  | 3 36  | 3 47  | 3 58  | 4 8   | 4 20  | 4 32  | 4 45  | 4 58  |
| 29 | 2 47  | 2 55  | 3 4   | 3 12  | 3 21  | 3 31  | 3 40  | 3 51  | 4 2   |
| 30 | 2 9   | 2 13  | 2 19  | 2 26  | 2 33  | 2 40  | 2 47  | 2 56  | 3 4   |
| 31 | 1 26  | 1 29  | 1 34  | 1 39  | 1 43  | 1 48  | 1 53  | 1 59  | 2 4   |
| 32 | 0 43  | 0 45  | 0 48  | 0 50  | 0 52  | 0 55  | 0 57  | 1 1   | 1 3   |

poli



# TABVLA POSITIONVM AD 57

| Eleuatio | 35 |    |    | 36 |    |    | 37 |    |    | 38 |    |    | 39 |    |    | 40 |    |  | 41 |  |  | 42 |  |  |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|----|--|--|----|--|--|
|          | 32 | 53 | 0  | 55 | 9  | 57 | 23 | 59 | 42 | 62 | 7  | 64 | 38 | 67 | 16 | 70 | 2  |  |    |  |  |    |  |  |
| Decli    | 31 | 51 | 56 | 54 | 2  | 56 | 13 | 58 | 29 | 60 | 51 | 63 | 18 | 65 | 51 | 68 | 32 |  |    |  |  |    |  |  |
| natio    | 30 | 50 | 54 | 52 | 57 | 55 | 5  | 57 | 18 | 59 | 36 | 62 | 0  | 64 | 29 | 67 | 6  |  |    |  |  |    |  |  |
|          | 29 | 49 | 53 | 51 | 54 | 53 | 59 | 56 | 9  | 58 | 24 | 60 | 44 | 63 | 10 | 65 | 43 |  |    |  |  |    |  |  |
| BORE     | 28 | 48 | 54 | 50 | 52 | 52 | 55 | 55 | 2  | 57 | 14 | 59 | 31 | 61 | 53 | 64 | 23 |  |    |  |  |    |  |  |
|          | 27 | 47 | 57 | 49 | 53 | 51 | 53 | 53 | 57 | 56 | 6  | 58 | 20 | 60 | 39 | 63 | 5  |  |    |  |  |    |  |  |
| ALIS     | 26 | 47 | 1  | 48 | 54 | 50 | 52 | 52 | 53 | 55 | 0  | 57 | 11 | 59 | 27 | 61 | 50 |  |    |  |  |    |  |  |
|          | 25 | 46 | 6  | 47 | 57 | 49 | 52 | 51 | 50 | 53 | 55 | 56 | 3  | 58 | 17 | 60 | 37 |  |    |  |  |    |  |  |
| supra    | 24 | 45 | 13 | 47 | 1  | 48 | 54 | 50 | 50 | 52 | 52 | 54 | 57 | 57 | 8  | 59 | 25 |  |    |  |  |    |  |  |
|          | 23 | 44 | 20 | 46 | 7  | 47 | 57 | 49 | 51 | 51 | 50 | 53 | 53 | 56 | 1  | 58 | 15 |  |    |  |  |    |  |  |
| terram   | 22 | 43 | 30 | 45 | 14 | 47 | 2  | 48 | 53 | 50 | 50 | 52 | 50 | 54 | 56 | 57 | 7  |  |    |  |  |    |  |  |
|          | 21 | 42 | 39 | 44 | 21 | 46 | 7  | 47 | 56 | 49 | 51 | 51 | 48 | 53 | 52 | 56 | 0  |  |    |  |  |    |  |  |
|          | 20 | 41 | 49 | 43 | 29 | 45 | 13 | 47 | 0  | 48 | 52 | 50 | 48 | 52 | 49 | 54 | 55 |  |    |  |  |    |  |  |
|          | 19 | 41 | 0  | 42 | 38 | 44 | 20 | 46 | 5  | 47 | 55 | 49 | 49 | 51 | 47 | 53 | 51 |  |    |  |  |    |  |  |
| BT       | 18 | 40 | 12 | 41 | 48 | 43 | 28 | 45 | 11 | 46 | 59 | 48 | 50 | 50 | 46 | 52 | 48 |  |    |  |  |    |  |  |
|          | 17 | 39 | 25 | 40 | 59 | 42 | 37 | 44 | 18 | 46 | 4  | 47 | 53 | 49 | 47 | 51 | 46 |  |    |  |  |    |  |  |
| AVS      | 16 | 38 | 38 | 40 | 11 | 41 | 47 | 43 | 26 | 45 | 10 | 46 | 56 | 48 | 48 | 50 | 45 |  |    |  |  |    |  |  |
|          | 15 | 37 | 52 | 39 | 23 | 40 | 57 | 42 | 34 | 44 | 16 | 46 | 1  | 47 | 50 | 49 | 45 |  |    |  |  |    |  |  |
| TRA      | 14 | 37 | 6  | 38 | 35 | 40 | 8  | 41 | 43 | 43 | 23 | 45 | 6  | 46 | 53 | 48 | 45 |  |    |  |  |    |  |  |
|          | 13 | 36 | 21 | 37 | 48 | 39 | 19 | 40 | 53 | 42 | 30 | 44 | 11 | 45 | 57 | 47 | 47 |  |    |  |  |    |  |  |
| LIS      | 12 | 35 | 37 | 32 | 2  | 38 | 31 | 40 | 3  | 41 | 39 | 43 | 17 | 45 | 1  | 46 | 49 |  |    |  |  |    |  |  |
|          | 11 | 34 | 52 | 36 | 16 | 37 | 43 | 39 | 13 | 40 | 47 | 42 | 24 | 44 | 6  | 45 | 52 |  |    |  |  |    |  |  |
| sub      | 10 | 34 | 9  | 35 | 31 | 36 | 56 | 38 | 24 | 39 | 57 | 41 | 31 | 43 | 11 | 44 | 55 |  |    |  |  |    |  |  |
|          | 9  | 33 | 25 | 34 | 45 | 36 | 9  | 37 | 35 | 39 | 6  | 40 | 39 | 42 | 17 | 43 | 59 |  |    |  |  |    |  |  |
| terra    | 8  | 32 | 42 | 34 | 1  | 35 | 23 | 36 | 47 | 38 | 16 | 39 | 47 | 41 | 23 | 43 | 3  |  |    |  |  |    |  |  |
|          | 7  | 31 | 59 | 33 | 16 | 34 | 37 | 35 | 59 | 37 | 26 | 38 | 56 | 40 | 30 | 42 | 8  |  |    |  |  |    |  |  |
|          | 6  | 31 | 16 | 32 | 32 | 33 | 51 | 35 | 12 | 36 | 37 | 38 | 5  | 39 | 37 | 41 | 13 |  |    |  |  |    |  |  |
|          | 5  | 30 | 34 | 31 | 48 | 33 | 5  | 34 | 24 | 35 | 48 | 37 | 14 | 38 | 44 | 40 | 18 |  |    |  |  |    |  |  |
|          | 4  | 29 | 51 | 31 | 4  | 32 | 19 | 33 | 37 | 34 | 59 | 36 | 23 | 37 | 51 | 39 | 24 |  |    |  |  |    |  |  |
|          | 3  | 29 | 9  | 30 | 20 | 31 | 34 | 32 | 50 | 34 | 10 | 35 | 32 | 36 | 59 | 38 | 29 |  |    |  |  |    |  |  |
|          | 2  | 28 | 27 | 29 | 36 | 30 | 49 | 32 | 3  | 33 | 21 | 34 | 42 | 36 | 6  | 37 | 35 |  |    |  |  |    |  |  |
|          | 1  | 27 | 45 | 28 | 53 | 30 | 3  | 31 | 16 | 32 | 33 | 33 | 51 | 35 | 14 | 36 | 41 |  |    |  |  |    |  |  |
|          | 0  | 27 | 3  | 28 | 9  | 29 | 18 | 30 | 29 | 31 | 44 | 33 | 1  | 34 | 22 | 35 | 47 |  |    |  |  |    |  |  |



## GRADVS LATITVDINIS.

|    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51     | poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|--------|------|
| 6  | 6     | 6     | 6     | 6     | 6     | 6     | 6     | 6     | 6      |      |
| 32 | 72 54 | 75 57 | 79 10 | 82 34 | 86 12 | 90 6  | 94 17 | 98 50 | 103 49 |      |
| 31 | 71 21 | 74 18 | 77 26 | 80 44 | 84 15 | 88 1  | 92 4  | 96 26 | 101 13 |      |
| 30 | 69 51 | 72 43 | 75 46 | 78 58 | 82 23 | 86 2  | 89 57 | 94 11 | 98 48  |      |
| 29 | 68 24 | 71 12 | 74 10 | 77 17 | 80 36 | 84 9  | 87 57 | 92 3  | 96 31  |      |
| 28 | 67 0  | 69 44 | 72 37 | 75 40 | 78 54 | 82 21 | 86 2  | 90 1  | 94 21  |      |
| 27 | 65 38 | 68 19 | 71 8  | 74 6  | 77 15 | 80 37 | 84 13 | 88 5  | 92 19  |      |
| 26 | 64 19 | 66 56 | 69 41 | 72 35 | 75 40 | 78 57 | 82 28 | 86 14 | 90 21  |      |
| 25 | 63 3  | 65 36 | 68 18 | 71 7  | 74 8  | 77 21 | 80 16 | 84 28 | 88 29  |      |
| 24 | 61 48 | 64 18 | 66 56 | 69 42 | 72 39 | 75 47 | 79 8  | 82 45 | 86 40  |      |
| 23 | 60 35 | 63 2  | 65 37 | 68 20 | 71 12 | 74 17 | 77 34 | 81 5  | 84 56  |      |
| 22 | 59 24 | 61 48 | 64 20 | 66 59 | 69 48 | 72 49 | 76 2  | 79 29 | 83 15  |      |
| 21 | 58 15 | 60 36 | 63 4  | 65 40 | 68 26 | 71 23 | 74 32 | 77 56 | 81 37  |      |
| 20 | 57 6  | 59 25 | 61 51 | 64 23 | 67 6  | 70 0  | 73 15 | 76 24 | 80 2   |      |
| 19 | 56 0  | 58 15 | 60 39 | 63 8  | 65 48 | 68 38 | 71 40 | 74 56 | 78 29  |      |
| 18 | 54 54 | 57 7  | 59 28 | 61 55 | 64 31 | 67 18 | 70 17 | 73 29 | 76 58  |      |
| 17 | 53 50 | 56 0  | 58 18 | 60 42 | 63 16 | 66 0  | 68 56 | 72 4  | 75 30  |      |
| 16 | 52 47 | 54 55 | 57 10 | 59 31 | 62 2  | 64 43 | 65 36 | 70 41 | 74 3   |      |
| 15 | 51 44 | 53 50 | 56 2  | 58 22 | 60 50 | 63 28 | 66 17 | 69 19 | 72 38  |      |
| 14 | 50 43 | 52 46 | 54 56 | 57 13 | 59 38 | 62 14 | 65 0  | 67 59 | 71 15  |      |
| 13 | 49 42 | 51 43 | 53 51 | 56 5  | 58 28 | 61 0  | 63 44 | 66 40 | 69 53  |      |
| 12 | 48 42 | 50 41 | 52 46 | 54 58 | 57 19 | 59 48 | 62 29 | 65 22 | 68 32  |      |
| 11 | 47 43 | 49 39 | 51 42 | 53 52 | 56 10 | 58 37 | 61 15 | 64 6  | 67 12  |      |
| 10 | 46 44 | 48 38 | 50 39 | 52 46 | 55 2  | 57 27 | 60 2  | 62 50 | 65 54  |      |
| 9  | 45 46 | 47 38 | 49 37 | 51 41 | 53 55 | 56 17 | 58 50 | 61 35 | 64 36  |      |
| 8  | 44 48 | 46 38 | 48 35 | 50 37 | 52 48 | 55 8  | 57 38 | 60 20 | 63 19  |      |
| 7  | 43 50 | 45 39 | 47 33 | 49 33 | 51 42 | 53 59 | 56 27 | 59 7  | 62 2   |      |
| 6  | 42 53 | 44 40 | 46 32 | 48 30 | 50 36 | 52 51 | 55 17 | 57 54 | 60 46  |      |
| 5  | 41 57 | 43 41 | 45 31 | 47 27 | 49 31 | 51 44 | 54 7  | 56 41 | 59 31  |      |
| 4  | 41 0  | 42 42 | 44 31 | 46 24 | 48 26 | 50 36 | 52 57 | 55 29 | 58 16  |      |
| 3  | 40 4  | 41 44 | 43 30 | 45 22 | 47 21 | 49 29 | 51 47 | 54 17 | 57 2   |      |
| 2  | 39 8  | 40 46 | 42 30 | 44 19 | 46 17 | 48 22 | 50 38 | 53 5  | 57 47  |      |
| 1  | 38 12 | 39 48 | 41 30 | 43 17 | 45 12 | 47 16 | 49 29 | 51 54 | 54 33  |      |
| 0  | 37 16 | 38 50 | 40 30 | 42 15 | 44 8  | 46 9  | 48 20 | 50 42 | 53 19  |      |



# TABVLA POSITIONVM AD 57

| Eleuatio | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 |    |    |    |    |    |    |    |    |    |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|          | 0  | 27 | 3  | 28 | 9  | 29 | 18 | 30 | 29 | 31 | 44 | 33 | 1  | 34 | 22 | 35 | 47 |
| Decli    | 1  | 26 | 21 | 27 | 25 | 28 | 33 | 29 | 42 | 30 | 55 | 32 | 11 | 33 | 30 | 34 | 53 |
| natio    | 2  | 25 | 39 | 26 | 42 | 27 | 47 | 28 | 55 | 30 | 7  | 31 | 20 | 32 | 38 | 33 | 59 |
|          | 3  | 24 | 57 | 25 | 58 | 27 | 2  | 28 | 8  | 29 | 18 | 30 | 30 | 31 | 45 | 33 | 5  |
| AVS      | 4  | 24 | 15 | 25 | 14 | 26 | 17 | 27 | 21 | 28 | 29 | 29 | 39 | 30 | 53 | 32 | 10 |
|          | 5  | 23 | 32 | 24 | 30 | 25 | 31 | 26 | 34 | 27 | 40 | 28 | 48 | 30 | 0  | 31 | 16 |
| TRA      | 6  | 22 | 50 | 23 | 46 | 24 | 45 | 25 | 46 | 26 | 51 | 27 | 57 | 29 | 7  | 30 | 21 |
|          | 7  | 22 | 7  | 23 | 2  | 23 | 59 | 24 | 59 | 26 | 2  | 27 | 6  | 28 | 14 | 29 | 26 |
| LIS      | 8  | 21 | 24 | 22 | 17 | 23 | 13 | 24 | 11 | 25 | 12 | 26 | 15 | 27 | 21 | 28 | 31 |
|          | 9  | 20 | 41 | 21 | 33 | 22 | 27 | 23 | 23 | 24 | 22 | 25 | 23 | 26 | 27 | 27 | 35 |
| supra    | 10 | 19 | 57 | 20 | 47 | 21 | 40 | 22 | 34 | 23 | 31 | 24 | 31 | 25 | 33 | 26 | 39 |
|          | 11 | 19 | 14 | 20 | 2  | 20 | 53 | 21 | 35 | 22 | 41 | 23 | 38 | 24 | 38 | 25 | 42 |
| terram   | 12 | 18 | 29 | 19 | 16 | 20 | 5  | 20 | 55 | 21 | 49 | 22 | 45 | 23 | 43 | 24 | 45 |
|          | 13 | 17 | 45 | 18 | 30 | 19 | 17 | 20 | 5  | 20 | 58 | 21 | 51 | 22 | 47 | 23 | 47 |
|          | 14 | 17 | 0  | 17 | 43 | 18 | 28 | 19 | 15 | 20 | 5  | 20 | 56 | 21 | 51 | 22 | 49 |
|          | 15 | 16 | 14 | 16 | 55 | 17 | 39 | 18 | 24 | 19 | 12 | 20 | 1  | 20 | 54 | 21 | 49 |
| ET       | 16 | 15 | 28 | 16 | 7  | 16 | 49 | 17 | 32 | 18 | 18 | 19 | 6  | 19 | 56 | 20 | 49 |
|          | 17 | 14 | 41 | 15 | 19 | 15 | 59 | 16 | 40 | 17 | 24 | 18 | 9  | 18 | 57 | 19 | 48 |
| BORE     | 18 | 13 | 54 | 14 | 30 | 15 | 8  | 15 | 47 | 16 | 29 | 17 | 12 | 17 | 58 | 18 | 46 |
|          | 19 | 13 | 6  | 13 | 40 | 14 | 16 | 14 | 53 | 15 | 33 | 16 | 13 | 16 | 57 | 17 | 43 |
| ALIS     | 20 | 12 | 17 | 12 | 49 | 13 | 23 | 13 | 58 | 14 | 36 | 15 | 14 | 15 | 55 | 16 | 39 |
|          | 21 | 11 | 27 | 11 | 57 | 12 | 29 | 13 | 2  | 13 | 37 | 14 | 14 | 14 | 52 | 15 | 34 |
| sub      | 22 | 10 | 37 | 11 | 4  | 11 | 34 | 12 | 5  | 12 | 38 | 13 | 12 | 13 | 48 | 14 | 27 |
|          | 23 | 9  | 46 | 10 | 11 | 10 | 39 | 11 | 7  | 11 | 38 | 12 | 9  | 12 | 43 | 13 | 19 |
| terra    | 24 | 8  | 53 | 9  | 17 | 9  | 42 | 10 | 8  | 10 | 36 | 11 | 5  | 11 | 36 | 12 | 9  |
|          | 25 | 8  | 0  | 8  | 21 | 8  | 44 | 9  | 8  | 9  | 33 | 9  | 59 | 10 | 27 | 10 | 57 |
|          | 26 | 7  | 5  | 7  | 24 | 7  | 44 | 8  | 5  | 8  | 28 | 8  | 51 | 9  | 17 | 9  | 44 |
|          | 27 | 6  | 9  | 6  | 25 | 6  | 43 | 7  | 1  | 7  | 22 | 7  | 42 | 8  | 5  | 8  | 29 |
|          | 28 | 5  | 12 | 5  | 26 | 5  | 41 | 5  | 56 | 6  | 14 | 6  | 31 | 6  | 50 | 7  | 11 |
|          | 29 | 4  | 13 | 4  | 24 | 4  | 37 | 4  | 49 | 5  | 4  | 5  | 18 | 5  | 34 | 5  | 51 |
|          | 30 | 3  | 12 | 3  | 21 | 3  | 31 | 3  | 40 | 3  | 52 | 4  | 2  | 4  | 15 | 4  | 28 |
|          | 31 | 2  | 10 | 2  | 16 | 2  | 23 | 2  | 29 | 2  | 37 | 2  | 44 | 2  | 53 | 3  | 2  |
|          | 32 | 1  | 7  | 1  | 9  | 1  | 13 | 1  | 16 | 1  | 21 | 1  | 24 | 1  | 28 | 1  | 32 |



## GRADVS LATITVDINIS.

|    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51    | poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 0  | 37 16 | 38 50 | 40 30 | 42 15 | 44 8  | 46 9  | 48 20 | 50 42 | 53 19 |      |
| 1  | 36 20 | 37 52 | 39 30 | 41 13 | 43 4  | 45 2  | 47 11 | 49 30 | 52 5  |      |
| 2  | 35 24 | 36 54 | 38 30 | 40 11 | 41 59 | 43 56 | 46 2  | 48 19 | 50 51 |      |
| 3  | 34 28 | 35 56 | 37 30 | 39 8  | 40 55 | 42 49 | 44 53 | 47 7  | 49 36 |      |
| 4  | 33 32 | 34 58 | 36 29 | 38 6  | 39 50 | 41 42 | 43 43 | 45 55 | 48 22 |      |
| 5  | 32 35 | 33 59 | 35 29 | 37 3  | 38 45 | 40 34 | 42 33 | 44 43 | 47 7  |      |
| 6  | 31 39 | 33 0  | 34 28 | 36 0  | 37 40 | 39 27 | 41 23 | 43 30 | 45 52 |      |
| 7  | 30 42 | 32 1  | 33 27 | 34 57 | 36 34 | 38 19 | 40 13 | 42 17 | 45 36 |      |
| 8  | 29 44 | 31 2  | 32 25 | 33 53 | 35 28 | 37 10 | 39 2  | 41 4  | 43 19 |      |
| 9  | 28 46 | 30 2  | 31 23 | 32 49 | 34 21 | 36 1  | 37 50 | 39 49 | 42 2  |      |
| 10 | 27 48 | 29 2  | 30 21 | 31 44 | 33 14 | 34 51 | 36 38 | 38 34 | 40 44 |      |
| 11 | 26 49 | 28 1  | 29 17 | 30 38 | 32 6  | 33 41 | 35 25 | 37 18 | 39 26 |      |
| 12 | 25 50 | 26 59 | 28 14 | 29 32 | 30 57 | 32 30 | 34 11 | 36 2  | 38 6  |      |
| 13 | 24 50 | 25 57 | 27 9  | 28 25 | 29 48 | 31 18 | 32 56 | 34 44 | 36 45 |      |
| 14 | 23 49 | 24 54 | 26 4  | 27 17 | 28 38 | 30 4  | 31 40 | 33 25 | 35 23 |      |
| 15 | 22 48 | 23 50 | 24 58 | 26 8  | 27 26 | 28 50 | 30 23 | 32 5  | 34 0  |      |
| 16 | 21 45 | 22 45 | 23 50 | 24 59 | 26 14 | 27 35 | 29 4  | 30 43 | 32 35 |      |
| 17 | 20 42 | 21 40 | 22 42 | 23 48 | 25 0  | 26 18 | 27 44 | 29 20 | 31 8  |      |
| 18 | 19 38 | 20 33 | 21 32 | 22 35 | 23 45 | 25 0  | 26 23 | 27 55 | 29 40 |      |
| 19 | 18 32 | 19 25 | 20 21 | 21 22 | 22 28 | 23 40 | 25 0  | 26 28 | 28 9  |      |
| 20 | 17 26 | 18 15 | 19 9  | 20 7  | 21 10 | 22 18 | 23 45 | 25 0  | 26 36 |      |
| 21 | 16 17 | 17 4  | 17 56 | 18 50 | 19 50 | 20 55 | 22 8  | 23 28 | 25 1  |      |
| 22 | 15 8  | 15 52 | 16 40 | 17 31 | 18 28 | 19 29 | 20 38 | 21 55 | 23 23 |      |
| 23 | 13 57 | 14 38 | 15 23 | 16 10 | 17 3  | 18 1  | 19 6  | 20 19 | 21 42 |      |
| 24 | 12 44 | 13 12 | 14 4  | 14 48 | 15 37 | 16 31 | 17 32 | 18 39 | 19 58 |      |
| 25 | 11 29 | 12 4  | 12 42 | 13 23 | 14 8  | 14 57 | 15 54 | 16 56 | 18 9  |      |
| 26 | 10 13 | 10 44 | 11 19 | 11 55 | 12 36 | 13 21 | 14 12 | 15 10 | 16 17 |      |
| 27 | 8 54  | 9 21  | 9 52  | 10 24 | 11 1  | 11 41 | 12 27 | 13 19 | 14 19 |      |
| 28 | 7 32  | 7 56  | 8 23  | 8 50  | 9 22  | 9 57  | 10 38 | 11 23 | 12 17 |      |
| 29 | 6 8   | 6 28  | 6 50  | 7 13  | 7 40  | 8 9   | 8 43  | 9 21  | 10 7  |      |
| 30 | 4 41  | 4 57  | 5 14  | 5 32  | 5 53  | 6 16  | 6 43  | 7 13  | 7 50  |      |
| 31 | 3 11  | 3 22  | 3 34  | 3 46  | 4 1   | 4 17  | 4 36  | 4 58  | 5 25  |      |
| 32 | 1 38  | 1 43  | 1 50  | 1 56  | 2 4   | 2 12  | 2 23  | 2 34  | 2 49  |      |



TABVLA POSITIONVM AD 57.

| Eleuatio | 52 |     |    | 53  |    |     | 54 |     |    | 55  |    |     | 56 |  |  | 57 |  |  |   |  |  |   |  |  |   |  |  |
|----------|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|--|--|----|--|--|---|--|--|---|--|--|---|--|--|
|          | 8  |     |    | /   |    |     | 8  |     |    | /   |    |     | 8  |  |  | /  |  |  | 8 |  |  | / |  |  | 8 |  |  |
| Decli    | 32 | 109 | 20 | 115 | 32 | 122 | 41 | 131 | 12 | 137 | 29 | 164 | 12 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 31 | 106 | 29 | 112 | 24 | 119 | 10 | 127 | 8  | 133 | 25 | 157 | 42 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 30 | 103 | 52 | 109 | 32 | 115 | 59 | 123 | 34 | 129 | 51 | 152 | 45 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 29 | 101 | 25 | 106 | 52 | 113 | 6  | 120 | 22 | 126 | 39 | 148 | 36 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
| natio    | 28 | 99  | 6  | 104 | 24 | 110 | 24 | 117 | 26 | 123 | 43 | 144 | 58 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
| BORR     | 27 | 96  | 55 | 102 | 4  | 107 | 54 | 114 | 43 | 121 | 0  | 141 | 41 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
| ALIS     | 26 | 94  | 51 | 99  | 51 | 105 | 32 | 112 | 11 | 118 | 28 | 138 | 41 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 25 | 92  | 52 | 97  | 45 | 103 | 18 | 109 | 47 | 116 | 4  | 135 | 54 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
| fupra    | 24 | 90  | 57 | 95  | 44 | 101 | 10 | 107 | 31 | 113 | 48 | 133 | 17 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 23 | 89  | 7  | 93  | 48 | 99  | 7  | 105 | 21 | 111 | 38 | 130 | 49 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
| terram   | 22 | 87  | 21 | 91  | 56 | 97  | 9  | 103 | 16 | 109 | 33 | 128 | 28 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 21 | 85  | 39 | 90  | 8  | 95  | 16 | 103 | 17 | 107 | 34 | 126 | 14 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 20 | 83  | 59 | 88  | 24 | 93  | 26 | 99  | 21 | 105 | 38 | 124 | 5  |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 19 | 82  | 22 | 86  | 42 | 91  | 39 | 97  | 29 | 103 | 46 | 122 | 1  |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
| ET       | 18 | 80  | 47 | 85  | 4  | 89  | 56 | 95  | 41 | 101 | 58 | 120 | 1  |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 17 | 79  | 15 | 83  | 27 | 88  | 15 | 93  | 55 | 100 | 12 | 118 | 5  |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
| AVS      | 16 | 77  | 45 | 81  | 53 | 86  | 37 | 92  | 12 | 98  | 29 | 116 | 12 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 15 | 76  | 17 | 80  | 21 | 85  | 0  | 90  | 32 | 96  | 49 | 114 | 22 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
| TRA      | 14 | 74  | 50 | 78  | 50 | 83  | 26 | 88  | 54 | 95  | 11 | 112 | 35 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 13 | 73  | 24 | 77  | 21 | 81  | 54 | 87  | 17 | 93  | 34 | 110 | 50 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
| LIS      | 12 | 72  | 0  | 75  | 54 | 80  | 22 | 85  | 42 | 91  | 59 | 109 | 6  |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 11 | 70  | 37 | 74  | 28 | 78  | 53 | 84  | 9  | 90  | 26 | 107 | 25 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
| sub      | 10 | 69  | 16 | 73  | 3  | 77  | 25 | 82  | 37 | 88  | 54 | 105 | 45 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 9  | 67  | 55 | 71  | 39 | 75  | 57 | 81  | 6  | 87  | 23 | 104 | 7  |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
| terra    | 8  | 66  | 35 | 70  | 16 | 74  | 31 | 79  | 37 | 85  | 54 | 102 | 30 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 7  | 65  | 15 | 68  | 54 | 73  | 6  | 78  | 8  | 84  | 25 | 100 | 54 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 6  | 63  | 57 | 67  | 32 | 71  | 41 | 76  | 40 | 82  | 57 | 99  | 19 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 5  | 62  | 39 | 66  | 11 | 70  | 17 | 75  | 13 | 81  | 30 | 97  | 44 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 4  | 61  | 21 | 64  | 50 | 68  | 53 | 73  | 46 | 80  | 3  | 96  | 11 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 3  | 60  | 4  | 63  | 30 | 67  | 30 | 72  | 19 | 78  | 36 | 94  | 38 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 2  | 58  | 47 | 62  | 10 | 66  | 7  | 70  | 54 | 77  | 11 | 93  | 5  |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 1  | 57  | 30 | 60  | 51 | 64  | 45 | 69  | 28 | 75  | 45 | 91  | 32 |  |  |    |  |  |   |  |  |   |  |  |   |  |  |
|          | 0  | 56  | 13 | 59  | 31 | 63  | 22 | 68  | 2  | 74  | 19 | 90  | 0  |  |  |    |  |  |   |  |  |   |  |  |   |  |  |



## GRADVS LATITVDINIS.

|        |    | 52    | 53    | 54    | 55    | 56    | 57    |   |  |
|--------|----|-------|-------|-------|-------|-------|-------|---|--|
|        | 5  | 5     | 5     | 5     | 5     | 5     | 5     | 5 |  |
|        | 0  | 56 13 | 55 31 | 63 22 | 68 2  | 74 19 | 80 0  |   |  |
|        | 1  | 54 56 | 58 11 | 61 59 | 66 36 | 72 50 | 8 8   |   |  |
| Decli  | 2  | 53 39 | 56 52 | 60 37 | 65 10 | 71 21 | 86 5  |   |  |
|        | 3  | 52 22 | 55 32 | 59 14 | 63 45 | 69 22 | 8 2   |   |  |
| natio  | 4  | 51 5  | 54 12 | 57 51 | 62 18 | 68 22 | 83 49 |   |  |
|        | 5  | 49 47 | 52 51 | 56 27 | 60 51 | 66 52 | 82 16 |   |  |
| AVS    | 6  | 48 29 | 51 30 | 55 3  | 59 24 | 65 21 | 80 41 |   |  |
|        | 7  | 47 11 | 50 8  | 53 38 | 57 56 | 63 50 | 79 6  |   |  |
| TRA    | 8  | 45 51 | 48 46 | 52 13 | 56 27 | 62 18 | 77 30 |   |  |
|        | 9  | 44 31 | 47 23 | 50 47 | 54 58 | 60 44 | 75 53 |   |  |
| LIS    | 10 | 43 10 | 45 59 | 49 19 | 53 27 | 59 10 | 74 15 |   |  |
|        | 11 | 41 49 | 44 34 | 47 51 | 51 55 | 57 34 | 72 35 |   |  |
| supra  | 12 | 40 26 | 43 8  | 46 12 | 50 22 | 55 57 | 70 54 |   |  |
|        | 13 | 39 2  | 41 41 | 44 50 | 48 47 | 54 18 | 69 10 |   |  |
| terram | 14 | 37 36 | 40 12 | 43 18 | 47 10 | 52 37 | 67 25 |   |  |
|        | 15 | 36 9  | 38 41 | 41 44 | 45 32 | 50 55 | 65 38 |   |  |
|        | 16 | 34 41 | 37 9  | 40 7  | 43 52 | 49 10 | 63 48 |   |  |
|        | 17 | 33 11 | 35 35 | 38 29 | 41 9  | 47 22 | 61 55 |   |  |
| ET     | 18 | 31 39 | 33 58 | 36 48 | 40 23 | 45 31 | 59 59 |   |  |
|        | 19 | 30 4  | 32 20 | 35 5  | 38 35 | 43 38 | 57 59 |   |  |
| BORE   | 20 | 28 27 | 30 38 | 33 18 | 36 43 | 41 40 | 55 55 |   |  |
|        | 21 | 26 47 | 28 54 | 31 28 | 34 47 | 39 38 | 53 46 |   |  |
| ALIS   | 22 | 25 5  | 27 6  | 29 35 | 32 48 | 37 31 | 51 32 |   |  |
| sub    | 23 | 23 19 | 25 14 | 27 37 | 30 43 | 35 19 | 49 11 |   |  |
|        | 24 | 21 29 | 23 18 | 25 34 | 28 33 | 33 1  | 46 43 |   |  |
| terra  | 25 | 19 34 | 21 17 | 23 26 | 26 17 | 30 35 | 44 6  |   |  |
|        | 26 | 17 35 | 19 11 | 21 12 | 23 53 | 28 1  | 41 19 |   |  |
|        | 27 | 15 31 | 16 58 | 18 50 | 21 21 | 25 15 | 38 19 |   |  |
|        | 28 | 13 20 | 14 38 | 16 20 | 18 38 | 22 18 | 35 2  |   |  |
|        | 29 | 11 1  | 12 10 | 13 38 | 15 42 | 19 3  | 31 24 |   |  |
|        | 30 | 8 34  | 9 30  | 10 45 | 12 30 | 15 27 | 27 15 |   |  |
|        | 31 | 5 57  | 6 38  | 7 34  | 8 56  | 11 21 | 22 18 |   |  |
|        | 32 | 3 6   | 3 30  | 4 3   | 4 52  | 6 26  | 15 48 |   |  |



TABVLA POSITIONVM AD 60

| Eleuatio | I  | 2    | 3    | 4    | 5    | 6    | 7    | 8    |
|----------|----|------|------|------|------|------|------|------|
|          | 32 | 1 12 | 2 24 | 3 37 | 4 49 | 6 2  | 7 15 | 8 28 |
| Decli    | 31 | 1 11 | 2 21 | 3 32 | 4 43 | 5 55 | 7 6  | 8 18 |
| natio    | 30 | 1 10 | 2 18 | 3 28 | 4 38 | 5 48 | 6 58 | 8 8  |
|          | 29 | 1 8  | 2 16 | 3 24 | 4 32 | 5 41 | 6 49 | 7 58 |
| BORE     | 28 | 1 7  | 2 13 | 3 20 | 4 27 | 5 34 | 6 41 | 7 49 |
|          | 27 | 1 6  | 2 10 | 3 16 | 4 22 | 5 27 | 6 33 | 7 39 |
| ALIS     | 26 | 1 4  | 2 8  | 3 12 | 4 16 | 5 21 | 6 25 | 7 30 |
|          | 25 | 1 3  | 2 5  | 3 8  | 4 11 | 5 14 | 6 18 | 7 21 |
| fupra    | 24 | 1 2  | 2 2  | 3 4  | 4 6  | 5 8  | 6 10 | 7 12 |
|          | 23 | 1 0  | 2 0  | 3 1  | 4 1  | 5 2  | 6 2  | 7 3  |
| terram   | 22 | 0 59 | 1 58 | 2 57 | 3 56 | 4 56 | 5 55 | 6 55 |
|          | 21 | 0 58 | 1 55 | 2 53 | 3 51 | 4 49 | 5 48 | 6 46 |
|          | 20 | 0 57 | 1 53 | 2 50 | 3 46 | 4 43 | 5 41 | 6 38 |
|          | 19 | 0 56 | 1 50 | 2 46 | 3 42 | 4 38 | 5 33 | 6 29 |
| ET       | 18 | 0 54 | 1 48 | 2 43 | 3 37 | 4 32 | 5 26 | 6 21 |
|          | 17 | 0 53 | 1 46 | 2 39 | 3 33 | 4 26 | 5 19 | 6 13 |
| AVS      | 16 | 0 52 | 1 43 | 2 36 | 3 28 | 4 20 | 5 13 | 6 5  |
|          | 15 | 0 51 | 1 42 | 2 32 | 3 23 | 4 15 | 5 6  | 5 57 |
| TRA      | 14 | 0 50 | 1 39 | 2 29 | 3 19 | 4 9  | 4 59 | 5 49 |
|          | 13 | 0 49 | 1 37 | 2 26 | 3 15 | 4 3  | 4 52 | 5 41 |
| LIS      | 12 | 0 48 | 1 34 | 2 22 | 3 10 | 3 58 | 4 46 | 5 34 |
|          | 11 | 0 47 | 1 32 | 2 19 | 3 6  | 3 52 | 4 39 | 5 26 |
| fub      | 10 | 0 46 | 1 30 | 2 16 | 3 1  | 3 47 | 4 33 | 5 18 |
|          | 9  | 0 44 | 1 28 | 2 13 | 2 57 | 3 42 | 4 26 | 5 11 |
| terra    | 8  | 0 43 | 1 26 | 2 9  | 2 53 | 3 36 | 4 20 | 5 3  |
|          | 7  | 0 42 | 1 24 | 2 6  | 2 49 | 3 31 | 4 13 | 4 56 |
|          | 6  | 0 41 | 1 22 | 2 3  | 2 44 | 3 26 | 4 7  | 4 48 |
|          | 5  | 0 40 | 1 19 | 2 0  | 2 40 | 3 20 | 4 1  | 4 41 |
|          | 4  | 0 39 | 1 17 | 1 57 | 2 36 | 3 15 | 3 54 | 4 34 |
|          | 3  | 0 38 | 1 15 | 1 53 | 2 32 | 3 10 | 3 48 | 4 26 |
|          | 2  | 0 37 | 1 13 | 1 50 | 2 27 | 3 4  | 3 42 | 4 19 |
|          | 1  | 0 36 | 1 11 | 1 47 | 2 23 | 2 59 | 3 35 | 4 11 |
|          | 0  | 0 35 | 1 9  | 1 44 | 2 19 | 2 54 | 3 29 | 4 4  |



## GRADVS LATITVDINIS.

|    | 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 32 | 10 56 | 12 11 | 13 26 | 14 41 | 15 58 | 17 15 | 18 32 | 19 51 | 21 11 |
| 31 | 10 43 | 11 56 | 13 10 | 14 23 | 15 39 | 16 54 | 18 10 | 19 27 | 20 45 |
| 30 | 10 30 | 11 42 | 12 54 | 14 6  | 15 20 | 16 34 | 17 48 | 19 4  | 20 20 |
| 29 | 10 17 | 11 28 | 12 38 | 13 49 | 15 1  | 16 14 | 17 26 | 18 41 | 19 55 |
| 28 | 10 5  | 11 14 | 12 23 | 13 32 | 14 43 | 15 54 | 17 5  | 18 18 | 19 31 |
| 27 | 9 53  | 11 0  | 12 8  | 13 16 | 14 25 | 15 35 | 16 45 | 17 56 | 19 8  |
| 26 | 9 41  | 10 47 | 11 53 | 13 0  | 14 8  | 15 16 | 16 25 | 17 34 | 18 45 |
| 25 | 9 29  | 10 34 | 11 39 | 12 44 | 13 51 | 14 58 | 16 5  | 17 13 | 18 22 |
| 24 | 9 18  | 10 21 | 11 25 | 12 29 | 13 34 | 14 39 | 15 45 | 16 52 | 17 59 |
| 23 | 9 6   | 10 9  | 11 11 | 12 14 | 13 17 | 14 21 | 15 26 | 16 31 | 17 37 |
| 22 | 8 55  | 9 56  | 10 57 | 11 59 | 13 1  | 14 4  | 15 7  | 16 11 | 17 16 |
| 21 | 8 44  | 9 44  | 10 44 | 11 44 | 12 45 | 13 47 | 14 48 | 15 51 | 16 54 |
| 20 | 8 33  | 9 32  | 10 30 | 11 29 | 12 29 | 13 29 | 14 30 | 15 31 | 16 33 |
| 19 | 8 23  | 9 20  | 10 17 | 11 15 | 12 14 | 13 12 | 14 12 | 15 12 | 16 13 |
| 18 | 8 12  | 9 8   | 10 4  | 11 1  | 11 58 | 12 56 | 13 54 | 14 53 | 15 52 |
| 17 | 8 2   | 8 56  | 9 51  | 10 47 | 11 43 | 12 39 | 13 36 | 14 34 | 15 32 |
| 16 | 7 51  | 8 45  | 9 39  | 10 33 | 11 28 | 12 23 | 13 18 | 14 15 | 15 12 |
| 15 | 7 41  | 8 33  | 9 26  | 10 19 | 11 13 | 12 7  | 13 1  | 13 56 | 14 52 |
| 14 | 7 31  | 8 22  | 9 14  | 10 5  | 10 58 | 11 51 | 12 44 | 13 38 | 14 32 |
| 13 | 7 21  | 8 11  | 9 1   | 9 52  | 10 43 | 11 35 | 12 27 | 13 20 | 14 13 |
| 12 | 7 11  | 8 0   | 8 49  | 9 38  | 10 29 | 11 19 | 12 10 | 13 2  | 13 54 |
| 11 | 7 1   | 7 49  | 8 37  | 9 25  | 10 14 | 11 4  | 11 53 | 12 44 | 13 34 |
| 10 | 6 51  | 7 38  | 8 25  | 9 12  | 10 0  | 10 48 | 11 36 | 12 26 | 13 15 |
| 9  | 6 41  | 7 27  | 8 13  | 8 59  | 9 46  | 10 33 | 11 20 | 12 8  | 12 57 |
| 8  | 6 31  | 7 16  | 8 1   | 8 46  | 9 32  | 10 17 | 11 3  | 11 51 | 12 38 |
| 7  | 6 22  | 7 5   | 7 49  | 8 33  | 9 17  | 10 2  | 10 47 | 11 33 | 12 19 |
| 6  | 6 12  | 6 55  | 7 37  | 8 20  | 9 3   | 9 17  | 10 31 | 11 16 | 12 0  |
| 5  | 6 3   | 6 44  | 7 25  | 8 7   | 8 49  | 9 32  | 10 15 | 10 58 | 11 42 |
| 4  | 5 53  | 6 33  | 7 14  | 7 54  | 8 36  | 9 17  | 9 58  | 10 41 | 11 24 |
| 3  | 5 44  | 6 23  | 7 2   | 7 41  | 8 22  | 9 2   | 9 42  | 10 24 | 11 5  |
| 2  | 5 34  | 6 12  | 6 50  | 7 28  | 8 8   | 8 47  | 9 26  | 10 6  | 10 47 |
| 1  | 5 24  | 6 2   | 6 39  | 7 16  | 7 54  | 8 32  | 9 10  | 9 49  | 10 28 |
| 0  | 5 15  | 5 51  | 6 27  | 7 3   | 7 40  | 8 17  | 8 54  | 9 32  | 10 10 |

poli



# TABVLA POSITIONVM AD 60

| Eleuatio | I    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |
|----------|------|------|------|------|------|------|------|------|
|          | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    |
| Decli    | 0 35 | 1 9  | 1 44 | 2 19 | 2 54 | 3 29 | 4 4  | 4 35 |
| natio    | 0 34 | 1 7  | 1 41 | 2 15 | 2 45 | 3 23 | 3 57 | 4 31 |
|          | 0 33 | 1 5  | 1 38 | 2 11 | 2 44 | 3 16 | 3 49 | 4 22 |
|          | 0 32 | 1 3  | 1 35 | 2 6  | 2 38 | 3 10 | 3 42 | 4 14 |
| AVS      | 0 31 | 1 1  | 1 31 | 2 2  | 2 33 | 3 4  | 3 34 | 4 5  |
|          | 0 30 | 0 59 | 1 28 | 1 58 | 2 28 | 2 57 | 3 27 | 3 57 |
| TRA      | 0 29 | 0 56 | 1 25 | 1 54 | 2 22 | 2 51 | 3 20 | 3 48 |
|          | 0 28 | 0 54 | 1 22 | 1 49 | 2 17 | 2 45 | 3 12 | 3 40 |
|          | 0 27 | 0 52 | 1 19 | 1 45 | 2 12 | 2 38 | 3 5  | 3 31 |
| L IS     | 0 26 | 0 50 | 1 15 | 1 41 | 2 6  | 2 32 | 2 57 | 3 23 |
|          | 0 24 | 0 48 | 1 12 | 1 37 | 2 1  | 2 25 | 2 50 | 3 14 |
| supra    | 0 23 | 0 46 | 1 9  | 1 32 | 1 56 | 2 19 | 2 42 | 3 5  |
|          | 0 22 | 0 44 | 1 6  | 1 28 | 1 50 | 2 12 | 2 34 | 2 56 |
| terram   | 0 21 | 0 41 | 1 2  | 1 23 | 1 45 | 2 6  | 2 27 | 2 47 |
|          | 0 20 | 0 39 | 0 59 | 1 19 | 1 39 | 1 59 | 2 19 | 2 38 |
|          | 0 19 | 0 37 | 0 56 | 1 15 | 1 33 | 1 52 | 2 11 | 2 29 |
| BT       | 0 18 | 0 34 | 0 52 | 1 10 | 1 28 | 1 45 | 2 3  | 2 20 |
|          | 0 17 | 0 32 | 0 49 | 1 5  | 1 22 | 1 39 | 1 55 | 2 11 |
| BORR     | 0 16 | 0 30 | 0 45 | 1 1  | 1 16 | 1 32 | 1 47 | 2 2  |
|          | 0 14 | 0 28 | 0 42 | 0 56 | 1 10 | 1 25 | 1 39 | 1 53 |
| ALIS     | 0 13 | 0 25 | 0 38 | 0 52 | 1 5  | 1 17 | 1 30 | 1 43 |
|          | 0 12 | 0 23 | 0 35 | 0 47 | 1 59 | 1 10 | 1 22 | 1 33 |
| sub      | 0 11 | 0 20 | 0 31 | 0 42 | 0 52 | 1 3  | 1 13 | 1 24 |
|          | 0 10 | 0 18 | 0 27 | 0 37 | 0 46 | 0 56 | 1 5  | 1 14 |
| terra    | 0 8  | 0 16 | 0 24 | 0 32 | 0 40 | 0 48 | 0 56 | 1 4  |
|          | 0 7  | 0 13 | 0 20 | 0 27 | 0 34 | 0 40 | 0 47 | 0 54 |
|          | 0 6  | 0 10 | 0 16 | 0 22 | 0 27 | 0 33 | 0 38 | 0 43 |
|          | 0 4  | 0 8  | 0 12 | 0 16 | 0 21 | 0 25 | 0 29 | 0 33 |
|          | 0 3  | 0 5  | 0 8  | 0 11 | 0 14 | 0 17 | 0 19 | 0 22 |
|          | 0 2  | 0 2  | 0 4  | 0 6  | 0 7  | 0 9  | 0 10 | 0 11 |
|          | 0 0  | 0 0  | 0 0  | 0 0  | 0 0  | 0 0  | 0 0  | 0 0  |
|          | 0    |      |      |      |      |      |      |      |
|          | 0    |      |      |      |      |      |      |      |



GRADVS LATITVDINIS.

[illegible]



# TABVLA POSITIONVM AD 60.

| Eleuatio | 18       | 19             | 20             | 21             | 22             | 23             | 24             | 25             |                |
|----------|----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|          | g        | g              | g              | g              | g              | g              | g              | g              |                |
| Decli    | 32<br>31 | 22 32<br>22 5  | 23 53<br>23 24 | 25 17<br>24 46 | 26 41<br>26 8  | 28 6<br>27 32  | 29 34<br>28 58 | 31 3<br>30 25  | 32 33<br>31 52 |
| natio    | 30<br>29 | 21 38<br>21 12 | 22 56<br>22 28 | 24 16<br>23 46 | 25 36<br>25 5  | 26 58<br>26 25 | 28 22<br>27 48 | 29 48<br>29 11 | 31 14<br>30 36 |
| BORE     | 28<br>27 | 20 46<br>20 21 | 22 1<br>21 34  | 23 17<br>22 49 | 24 35<br>24 5  | 25 53<br>25 22 | 27 14<br>26 40 | 28 36<br>28 1  | 29 58<br>29 22 |
| ALIS     | 26<br>25 | 19 56<br>19 32 | 21 8<br>20 42  | 22 22<br>21 54 | 23 35<br>23 7  | 24 51<br>24 21 | 26 8<br>25 36  | 27 27<br>26 53 | 28 46<br>28 11 |
| supra    | 24<br>23 | 19 8<br>18 45  | 20 17<br>19 52 | 21 27<br>21 1  | 22 38<br>22 10 | 23 51<br>23 22 | 25 5<br>24 34  | 26 20<br>25 48 | 27 36<br>27 2  |
| terram   | 22<br>21 | 18 22<br>17 59 | 19 28<br>19 4  | 20 35<br>20 10 | 21 43<br>21 16 | 22 53<br>22 24 | 24 4<br>23 34  | 25 16<br>24 44 | 26 29<br>26 56 |
| :        | 20<br>19 | 17 36<br>17 14 | 18 40<br>18 17 | 19 45<br>19 20 | 20 50<br>20 24 | 21 56<br>21 29 | 23 4<br>22 35  | 24 13<br>23 43 | 25 23<br>24 51 |
| ET       | 18<br>17 | 16 53<br>16 31 | 17 53<br>17 30 | 18 55<br>18 31 | 19 58<br>19 32 | 21 2<br>20 35  | 22 7<br>21 38  | 23 13<br>22 43 | 24 20<br>23 49 |
| AVS      | 16<br>15 | 16 10<br>15 49 | 17 8<br>16 46  | 18 7<br>17 44  | 19 7<br>18 42  | 20 8<br>19 42  | 21 10<br>20 43 | 22 14<br>21 45 | 23 18<br>22 48 |
| TRA      | 14<br>13 | 15 28<br>15 7  | 16 23<br>16 2  | 17 20<br>16 57 | 18 18<br>17 53 | 19 16<br>18 50 | 20 16<br>19 49 | 21 16<br>20 48 | 22 18<br>21 48 |
| LIS      | 12<br>11 | 14 47<br>14 26 | 15 40<br>15 18 | 16 34<br>16 11 | 17 29<br>17 5  | 18 25<br>17 59 | 19 22<br>18 55 | 20 20<br>19 52 | 21 18<br>20 49 |
| sub      | 10<br>9  | 14 6<br>13 46  | 14 57<br>14 36 | 15 49<br>15 26 | 16 41<br>16 17 | 17 34<br>17 9  | 18 29<br>18 2  | 19 24<br>18 57 | 20 20<br>19 51 |
| ter      | 8<br>7   | 13 26<br>13 6  | 14 14<br>13 53 | 15 4<br>14 42  | 15 54<br>15 30 | 16 44<br>16 20 | 17 36<br>17 10 | 18 27<br>18 2  | 19 22<br>18 54 |
| ra       | 6<br>5   | 12 46<br>12 27 | 13 32<br>13 12 | 14 20<br>13 57 | 15 7<br>14 43  | 15 55<br>15 31 | 16 44<br>16 19 | 17 35<br>17 8  | 18 26<br>17 57 |
|          | 4<br>3   | 12 7<br>11 48  | 12 51<br>12 30 | 13 35<br>13 14 | 14 20<br>13 57 | 15 6<br>14 42  | 15 53<br>15 28 | 16 41<br>16 14 | 17 29<br>17 1  |
|          | 2<br>1   | 11 28<br>11 8  | 12 9<br>11 49  | 12 52<br>12 30 | 13 34<br>13 11 | 14 18<br>13 53 | 15 2<br>14 36  | 15 47<br>15 21 | 16 33<br>16 5  |
|          | 0        | 10 49          | 11 28          | 12 8           | 12 48          | 13 29          | 14 11          | 14 54          | 15 37          |



## GRADVS LATITVDINIS.

|    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| ̄  | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄    |
| 32 | 34 6  | 34 51 | 36 27 | 38 56 | 40 37 | 42 21 | 44 8  | 45 57 | 47 51 |      |
| 31 | 33 23 | 34 8  | 35 43 | 38 7  | 39 46 | 41 28 | 43 12 | 44 59 | 46 50 |      |
| 30 | 32 42 | 33 27 | 34 59 | 37 20 | 38 56 | 40 36 | 42 18 | 44 2  | 45 50 |      |
| 29 | 32 2  | 32 47 | 34 17 | 36 34 | 38 8  | 39 45 | 41 25 | 43 7  | 44 52 |      |
| 28 | 31 23 | 32 8  | 33 36 | 35 48 | 37 21 | 38 56 | 40 33 | 42 13 | 43 56 |      |
| 27 | 30 44 | 31 29 | 32 56 | 35 4  | 36 34 | 38 8  | 39 43 | 41 20 | 43 1  |      |
| 26 | 30 7  | 30 52 | 32 16 | 34 21 | 35 49 | 37 20 | 38 54 | 40 29 | 42 7  |      |
| 25 | 29 30 | 30 15 | 31 38 | 33 39 | 35 5  | 36 34 | 38 5  | 39 39 | 41 15 |      |
| 24 | 28 54 | 29 39 | 31 0  | 32 57 | 34 34 | 35 49 | 37 18 | 38 49 | 40 24 |      |
| 23 | 28 18 | 29 3  | 30 22 | 32 17 | 33 39 | 35 5  | 36 32 | 38 1  | 39 33 |      |
| 22 | 27 43 | 28 28 | 29 46 | 31 36 | 32 57 | 34 21 | 35 46 | 37 14 | 38 44 |      |
| 21 | 27 8  | 27 53 | 29 10 | 30 57 | 32 16 | 33 38 | 35 2  | 36 27 | 37 55 |      |
| 20 | 26 35 | 27 20 | 28 34 | 30 18 | 31 36 | 32 56 | 34 18 | 35 41 | 37 8  |      |
| 19 | 26 1  | 26 46 | 27 59 | 29 40 | 30 56 | 32 14 | 33 34 | 34 56 | 36 21 |      |
| 18 | 25 28 | 26 13 | 27 25 | 29 3  | 30 17 | 31 34 | 32 52 | 34 12 | 35 35 |      |
| 17 | 24 56 | 25 41 | 26 51 | 28 25 | 29 38 | 30 53 | 32 10 | 33 28 | 34 45 |      |
| 16 | 24 24 | 25 9  | 26 17 | 27 48 | 29 0  | 30 13 | 31 28 | 32 45 | 34 4  |      |
| 15 | 23 52 | 24 37 | 25 44 | 27 12 | 28 22 | 29 34 | 30 47 | 32 2  | 33 20 |      |
| 14 | 23 20 | 24 5  | 25 11 | 26 36 | 27 45 | 28 55 | 30 7  | 31 20 | 32 36 |      |
| 13 | 22 49 | 23 34 | 24 38 | 26 1  | 27 8  | 28 16 | 29 27 | 30 38 | 31 53 |      |
| 12 | 22 18 | 23 3  | 24 6  | 25 26 | 26 31 | 27 38 | 28 47 | 29 57 | 31 10 |      |
| 11 | 21 47 | 22 32 | 23 34 | 24 51 | 25 55 | 27 0  | 28 8  | 29 16 | 30 27 |      |
| 10 | 21 17 | 22 2  | 23 2  | 24 17 | 25 19 | 26 23 | 27 29 | 28 36 | 29 45 |      |
| 9  | 20 47 | 21 32 | 22 31 | 23 42 | 24 43 | 25 46 | 26 50 | 27 55 | 29 3  |      |
| 8  | 20 17 | 21 2  | 21 59 | 23 8  | 24 7  | 25 9  | 26 11 | 27 15 | 28 21 |      |
| 7  | 19 38 | 20 32 | 21 28 | 22 34 | 23 32 | 24 32 | 25 33 | 26 35 | 27 40 |      |
| 6  | 19 10 | 20 2  | 20 57 | 22 0  | 22 57 | 23 55 | 24 55 | 25 56 | 26 59 |      |
| 5  | 18 41 | 19 33 | 20 26 | 21 27 | 22 22 | 23 19 | 24 17 | 25 16 | 26 18 |      |
| 4  | 18 13 | 19 3  | 19 56 | 20 53 | 21 47 | 22 42 | 23 39 | 24 37 | 24 37 |      |
| 3  | 17 45 | 18 34 | 19 25 | 20 20 | 21 12 | 22 6  | 23 2  | 23 58 | 24 57 |      |
| 2  | 17 17 | 18 5  | 18 54 | 19 47 | 20 37 | 21 30 | 22 24 | 23 19 | 24 16 |      |
| 1  | 16 49 | 17 35 | 18 24 | 19 13 | 20 3  | 20 54 | 21 46 | 22 40 | 23 35 |      |
| 0  | 16 21 | 17 6  | 17 53 | 18 40 | 19 28 | 20 18 | 21 9  | 22 1  | 22 55 |      |



# TABVLA POSITIONVM AD 60.

| Elevatio |    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    |
|----------|----|-------|-------|-------|-------|-------|-------|-------|-------|
|          | g  | g     | g     | g     | g     | g     | g     | g     | g     |
| Decli    | 0  | 10 49 | 11 28 | 12 8  | 12 48 | 13 29 | 14 11 | 14 54 | 15 37 |
|          | 1  | 10 30 | 11 7  | 11 44 | 12 25 | 13 5  | 13 46 | 14 27 | 15 9  |
| natio    | 2  | 10 10 | 10 47 | 11 24 | 12 2  | 12 40 | 13 20 | 14 1  | 14 41 |
|          | 3  | 9 50  | 10 26 | 11 2  | 11 39 | 12 16 | 12 54 | 13 34 | 14 13 |
| AVS      | 4  | 9 31  | 10 5  | 10 41 | 11 16 | 11 52 | 12 29 | 13 7  | 13 42 |
|          | 5  | 9 11  | 9 44  | 10 19 | 10 53 | 11 27 | 12 3  | 12 40 | 13 17 |
| TRA      | 6  | 8 52  | 9 24  | 9 56  | 10 29 | 11 3  | 11 38 | 12 13 | 12 48 |
|          | 7  | 8 32  | 9 3   | 9 34  | 10 6  | 10 38 | 11 12 | 11 46 | 12 20 |
| LIS      | 8  | 8 12  | 8 42  | 9 12  | 9 42  | 10 14 | 10 46 | 11 19 | 11 52 |
|          | 9  | 7 52  | 8 20  | 8 50  | 9 19  | 9 49  | 10 20 | 10 51 | 11 23 |
| supra    | 10 | 7 32  | 7 59  | 8 27  | 8 55  | 9 24  | 9 53  | 10 24 | 10 54 |
|          | 11 | 7 12  | 7 38  | 8 5   | 8 31  | 8 59  | 9 27  | 9 56  | 10 25 |
| terrâ    | 12 | 6 51  | 7 16  | 7 42  | 8 7   | 8 33  | 9 10  | 9 28  | 9 56  |
|          | 13 | 6 31  | 6 54  | 7 19  | 7 43  | 8 8   | 8 33  | 9 0   | 9 26  |
| ET       | 14 | 6 10  | 6 33  | 6 56  | 7 18  | 7 42  | 8 6   | 8 32  | 8 56  |
|          | 15 | 5 49  | 6 10  | 6 32  | 6 54  | 7 16  | 7 39  | 8 3   | 8 26  |
| BORE     | 16 | 5 28  | 5 48  | 6 9   | 6 29  | 6 50  | 7 12  | 7 34  | 7 56  |
|          | 17 | 5 7   | 5 26  | 5 45  | 6 4   | 6 23  | 6 44  | 7 5   | 7 25  |
| ALIS     | 18 | 4 45  | 5 3   | 5 21  | 5 38  | 5 55  | 6 15  | 6 35  | 6 54  |
|          | 19 | 4 24  | 4 39  | 4 56  | 5 12  | 5 29  | 5 47  | 6 5   | 6 23  |
| sub      | 20 | 4 2   | 4 16  | 4 31  | 4 46  | 5 2   | 5 18  | 5 35  | 5 51  |
|          | 21 | 3 39  | 3 52  | 4 6   | 4 20  | 4 34  | 4 48  | 5 4   | 5 18  |
| terra    | 22 | 3 16  | 3 28  | 3 41  | 3 53  | 4 5   | 4 18  | 4 32  | 4 45  |
|          | 23 | 2 53  | 3 4   | 3 15  | 3 26  | 3 36  | 3 48  | 4 0   | 4 12  |
|          | 24 | 2 30  | 2 39  | 2 49  | 2 58  | 3 7   | 3 17  | 3 28  | 3 38  |
|          | 25 | 2 6   | 2 14  | 2 22  | 2 29  | 2 37  | 2 46  | 2 55  | 3 3   |
|          | 26 | 1 42  | 1 48  | 1 52  | 2 1   | 2 7   | 2 14  | 2 21  | 2 28  |
|          | 27 | 1 17  | 1 22  | 1 27  | 1 31  | 1 36  | 1 42  | 1 47  | 1 52  |
|          | 28 | 0 52  | 0 55  | 0 59  | 1 1   | 1 5   | 1 8   | 1 12  | 1 16  |
|          | 29 | 0 26  | 0 28  | 0 30  | 0 31  | 0 33  | 0 34  | 0 37  | 0 38  |
|          | 30 | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |
|          | 31 |       |       |       |       |       |       |       |       |
|          | 32 |       |       |       |       |       |       |       |       |



## GRADVS LATITVDINIS.

|    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| ̄  | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄    |
| 0  | 16 21 | 17 6  | 17 53 | 18 40 | 19 28 | 20 18 | 21 9  | 22 1  | 22 55 |      |
| 1  | 15 52 | 16 35 | 17 21 | 18 7  | 18 53 | 19 42 | 20 32 | 21 21 | 22 15 |      |
| 2  | 15 22 | 16 5  | 16 49 | 17 33 | 18 19 | 19 6  | 19 54 | 20 43 | 21 34 |      |
| 3  | 14 53 | 15 34 | 16 17 | 17 0  | 17 44 | 18 30 | 19 26 | 20 4  | 20 53 |      |
| 4  | 14 24 | 15 3  | 15 45 | 16 27 | 17 9  | 17 54 | 18 39 | 19 25 | 20 13 |      |
| 5  | 13 54 | 14 33 | 15 13 | 15 53 | 16 34 | 17 17 | 18 1  | 18 46 | 19 32 |      |
| 6  | 13 25 | 14 3  | 14 41 | 15 20 | 15 59 | 16 41 | 17 23 | 18 6  | 18 51 |      |
| 7  | 12 55 | 13 31 | 14 8  | 14 46 | 15 24 | 16 4  | 16 45 | 17 27 | 18 10 |      |
| 8  | 12 25 | 13 0  | 13 36 | 14 12 | 14 49 | 15 27 | 16 7  | 16 47 | 17 29 |      |
| 9  | 11 55 | 12 28 | 13 3  | 13 38 | 14 13 | 14 50 | 15 28 | 16 7  | 16 47 |      |
| 10 | 10 25 | 11 57 | 12 30 | 13 3  | 13 37 | 14 13 | 14 49 | 15 26 | 16 5  |      |
| 11 | 9 55  | 11 25 | 11 57 | 12 29 | 13 1  | 13 36 | 14 10 | 14 46 | 15 23 |      |
| 12 | 9 24  | 10 53 | 11 24 | 11 54 | 12 25 | 12 58 | 13 31 | 14 5  | 14 40 |      |
| 13 | 8 53  | 10 21 | 10 50 | 11 19 | 11 48 | 12 20 | 12 51 | 13 24 | 13 57 |      |
| 14 | 8 22  | 9 48  | 10 16 | 10 44 | 11 11 | 11 41 | 12 11 | 12 42 | 13 14 |      |
| 15 | 7 50  | 9 15  | 9 42  | 10 8  | 10 34 | 11 2  | 11 31 | 12 0  | 12 30 |      |
| 16 | 8 18  | 8 42  | 9 7   | 9 32  | 9 56  | 10 23 | 10 50 | 11 17 | 11 46 |      |
| 17 | 7 46  | 8 8   | 8 32  | 8 55  | 9 18  | 9 43  | 10 8  | 10 34 | 11 1  |      |
| 18 | 7 14  | 7 34  | 7 56  | 8 17  | 8 39  | 9 2   | 9 26  | 9 50  | 10 15 |      |
| 19 | 6 41  | 7 0   | 7 20  | 7 40  | 8 0   | 8 22  | 8 44  | 9 6   | 9 29  |      |
| 20 | 6 7   | 6 25  | 6 44  | 7 2   | 7 20  | 7 40  | 8 0   | 8 21  | 8 42  |      |
| 21 | 5 34  | 5 49  | 6 7   | 6 23  | 6 40  | 6 58  | 7 16  | 7 35  | 7 55  |      |
| 22 | 4 59  | 5 13  | 5 29  | 5 44  | 5 59  | 6 15  | 6 32  | 6 48  | 7 6   |      |
| 23 | 4 24  | 4 37  | 4 50  | 5 3   | 5 17  | 5 31  | 5 46  | 6 1   | 6 17  |      |
| 24 | 3 48  | 3 59  | 4 11  | 4 23  | 4 34  | 4 47  | 5 0   | 5 13  | 5 26  |      |
| 25 | 3 12  | 3 21  | 3 32  | 3 41  | 3 51  | 4 2   | 4 13  | 4 23  | 4 35  |      |
| 26 | 2 35  | 2 43  | 2 51  | 2 59  | 3 7   | 3 16  | 3 24  | 3 33  | 3 43  |      |
| 27 | 1 58  | 2 3   | 2 10  | 2 16  | 2 22  | 2 28  | 2 35  | 2 42  | 2 49  |      |
| 28 | 1 19  | 1 23  | 1 28  | 1 32  | 1 35  | 1 40  | 1 45  | 1 49  | 1 54  |      |
| 29 | 0 40  | 0 42  | 0 45  | 0 46  | 0 48  | 0 51  | 0 53  | 0 55  | 0 58  |      |
| 30 | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |      |
| 31 |       |       |       |       |       |       |       |       |       |      |
| 32 |       |       |       |       |       |       |       |       |       |      |



# TABVLA POSITIONVM AD 60

| Eleuatio | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 |
|----------|----|----|----|----|----|----|----|----|
|          | 32 | 49 | 51 | 53 | 56 | 58 | 60 | 63 |
| Decli    | 31 | 48 | 50 | 52 | 54 | 57 | 59 | 61 |
| natio    | 30 | 47 | 49 | 51 | 53 | 55 | 57 | 60 |
|          | 29 | 46 | 48 | 50 | 52 | 44 | 56 | 58 |
| BORE     | 28 | 45 | 47 | 49 | 51 | 43 | 55 | 57 |
|          | 27 | 44 | 46 | 48 | 50 | 52 | 54 | 56 |
| ALIS     | 26 | 43 | 45 | 47 | 49 | 51 | 53 | 55 |
|          | 25 | 42 | 44 | 46 | 48 | 50 | 52 | 54 |
| supra    | 24 | 42 | 43 | 45 | 47 | 49 | 50 | 52 |
|          | 23 | 41 | 42 | 44 | 46 | 47 | 49 | 51 |
| terram   | 22 | 40 | 41 | 43 | 45 | 46 | 48 | 50 |
|          | 21 | 39 | 41 | 42 | 44 | 46 | 47 | 49 |
|          | 20 | 38 | 40 | 41 | 43 | 45 | 46 | 48 |
|          | 19 | 37 | 39 | 40 | 42 | 44 | 45 | 47 |
| ET       | 18 | 37 | 38 | 39 | 41 | 43 | 44 | 46 |
|          | 17 | 36 | 37 | 39 | 40 | 42 | 43 | 45 |
| AVS      | 16 | 35 | 36 | 38 | 39 | 41 | 42 | 44 |
|          | 15 | 34 | 36 | 37 | 38 | 40 | 41 | 43 |
| TRA      | 14 | 33 | 35 | 36 | 38 | 39 | 41 | 42 |
|          | 13 | 33 | 34 | 35 | 37 | 38 | 40 | 41 |
| LIS      | 12 | 32 | 33 | 35 | 36 | 37 | 39 | 40 |
|          | 11 | 31 | 32 | 34 | 35 | 36 | 38 | 39 |
| sub      | 10 | 30 | 32 | 33 | 34 | 36 | 37 | 38 |
|          | 9  | 30 | 31 | 32 | 33 | 35 | 36 | 38 |
| ter      | 8  | 29 | 30 | 31 | 33 | 34 | 35 | 37 |
|          | 7  | 28 | 29 | 31 | 32 | 33 | 34 | 36 |
| ra       | 6  | 28 | 29 | 30 | 31 | 32 | 34 | 35 |
|          | 5  | 27 | 28 | 29 | 30 | 31 | 33 | 34 |
|          | 4  | 26 | 27 | 28 | 29 | 31 | 32 | 33 |
|          | 3  | 25 | 26 | 28 | 29 | 30 | 31 | 32 |
|          | 2  | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
|          | 1  | 24 | 25 | 26 | 27 | 28 | 29 | 31 |
|          | 0  | 23 | 24 | 25 | 26 | 27 | 28 | 30 |



## GRADVS LATITVDINIS.

|    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51    | pol |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| g  | g     | g     | g     | g     | g     | g     | g     | g     | g     | g   |
| 32 | 68 12 | 71 0  | 73 56 | 77 2  | 80 19 | 83 50 | 87 34 | 91 37 | 95 59 |     |
| 31 | 66 39 | 69 21 | 72 12 | 75 12 | 78 22 | 81 45 | 85 21 | 89 13 | 93 23 |     |
| 30 | 65 9  | 67 46 | 70 32 | 73 26 | 76 30 | 79 46 | 83 14 | 86 58 | 90 58 |     |
| 29 | 63 42 | 66 15 | 68 56 | 71 45 | 74 43 | 77 53 | 81 14 | 84 50 | 88 41 |     |
| 28 | 62 18 | 64 47 | 67 23 | 70 8  | 73 1  | 76 5  | 79 19 | 82 48 | 86 31 |     |
| 27 | 60 56 | 63 22 | 65 54 | 68 34 | 71 22 | 74 21 | 77 30 | 80 52 | 84 29 |     |
| 26 | 59 37 | 61 59 | 64 27 | 67 3  | 69 47 | 72 41 | 75 45 | 79 1  | 82 31 |     |
| 25 | 58 21 | 60 39 | 63 4  | 65 35 | 68 15 | 71 5  | 74 3  | 77 15 | 80 39 |     |
| 24 | 57 6  | 59 21 | 61 42 | 64 10 | 66 46 | 69 31 | 72 25 | 75 32 | 78 50 |     |
| 23 | 55 53 | 58 5  | 60 23 | 62 48 | 65 19 | 68 1  | 70 51 | 73 52 | 77 6  |     |
| 22 | 54 42 | 56 51 | 59 6  | 61 27 | 63 55 | 66 33 | 69 19 | 72 16 | 75 25 |     |
| 21 | 53 33 | 55 39 | 57 50 | 60 8  | 62 33 | 65 7  | 67 49 | 70 43 | 73 47 |     |
| 20 | 52 24 | 54 28 | 56 37 | 58 51 | 61 13 | 63 44 | 66 22 | 69 11 | 72 12 |     |
| 19 | 51 18 | 53 18 | 55 25 | 57 36 | 59 55 | 62 22 | 67 57 | 67 43 | 70 39 |     |
| 18 | 50 12 | 52 10 | 54 14 | 56 23 | 58 38 | 61 2  | 63 34 | 66 16 | 69 8  |     |
| 17 | 49 8  | 51 3  | 53 14 | 55 10 | 57 23 | 59 44 | 62 13 | 64 51 | 67 40 |     |
| 16 | 48 5  | 49 58 | 51 56 | 53 59 | 56 9  | 58 27 | 60 53 | 63 28 | 66 13 |     |
| 15 | 47 2  | 48 53 | 50 48 | 52 50 | 54 57 | 57 12 | 59 34 | 62 6  | 64 48 |     |
| 14 | 46 1  | 47 49 | 49 42 | 51 41 | 53 45 | 55 58 | 58 17 | 60 46 | 63 25 |     |
| 13 | 45 0  | 46 46 | 48 37 | 50 33 | 52 35 | 54 44 | 57 1  | 59 27 | 62 3  |     |
| 12 | 44 0  | 45 44 | 47 32 | 49 26 | 51 26 | 53 32 | 55 46 | 58 9  | 60 42 |     |
| 11 | 43 1  | 44 42 | 46 28 | 48 20 | 50 17 | 52 21 | 54 32 | 56 53 | 59 22 |     |
| 10 | 42 2  | 43 41 | 45 25 | 47 14 | 49 9  | 51 11 | 53 19 | 55 37 | 58 4  |     |
| 9  | 41 4  | 42 41 | 44 23 | 46 9  | 48 2  | 50 1  | 52 7  | 54 22 | 56 46 |     |
| 8  | 40 6  | 41 41 | 43 21 | 45 5  | 46 55 | 48 52 | 50 55 | 53 7  | 55 29 |     |
| 7  | 39 8  | 40 42 | 42 19 | 44 1  | 45 49 | 47 43 | 49 44 | 51 54 | 54 12 |     |
| 6  | 38 11 | 39 43 | 41 18 | 42 58 | 44 43 | 46 35 | 48 34 | 50 41 | 52 56 |     |
| 5  | 37 15 | 38 24 | 40 17 | 41 55 | 43 38 | 45 28 | 47 24 | 49 28 | 51 31 |     |
| 4  | 36 18 | 37 45 | 39 17 | 40 52 | 42 33 | 44 20 | 46 14 | 48 16 | 50 26 |     |
| 3  | 35 22 | 36 47 | 38 16 | 39 50 | 41 28 | 43 13 | 45 4  | 47 4  | 49 12 |     |
| 2  | 34 26 | 35 49 | 37 16 | 38 47 | 40 24 | 42 6  | 43 55 | 45 52 | 47 57 |     |
| 1  | 33 30 | 34 51 | 36 16 | 37 45 | 39 19 | 42 0  | 42 46 | 44 41 | 46 43 |     |
| 0  | 32 34 | 33 53 | 35 16 | 36 43 | 38 15 | 39 53 | 41 37 | 43 29 | 45 29 |     |



# TABVLA POSITIONVM AD 60

| Eleuatio | 35 | 36    | 37    | 38    | 39    | 40    | 41    | 42    |
|----------|----|-------|-------|-------|-------|-------|-------|-------|
|          | 0  | 1     | 2     | 3     | 4     | 5     | 6     | 7     |
| Decli    | 0  | 23 51 | 24 48 | 25 47 | 26 49 | 27 53 | 28 59 | 30 8  |
| natio    | 1  | 23 9  | 24 4  | 25 2  | 26 2  | 27 4  | 28 9  | 29 16 |
| AVS      | 2  | 22 27 | 23 21 | 24 16 | 25 15 | 26 16 | 27 18 | 28 24 |
| TRA      | 3  | 21 45 | 22 37 | 23 31 | 24 28 | 25 27 | 26 28 | 27 31 |
| ALIS     | 4  | 21 3  | 21 53 | 22 46 | 23 41 | 24 38 | 25 37 | 26 39 |
| supra    | 5  | 20 20 | 21 9  | 22 0  | 22 54 | 23 49 | 24 46 | 25 46 |
| terram   | 6  | 19 38 | 20 25 | 21 14 | 22 6  | 23 0  | 23 55 | 24 53 |
| ET       | 7  | 18 55 | 19 41 | 20 28 | 21 19 | 22 11 | 23 4  | 24 0  |
| BORE     | 8  | 18 12 | 18 56 | 19 42 | 20 31 | 21 21 | 22 13 | 23 7  |
| ALIS     | 9  | 17 29 | 18 12 | 18 56 | 19 43 | 20 31 | 21 21 | 22 13 |
| sub      | 10 | 16 45 | 17 26 | 18 9  | 18 54 | 19 40 | 20 29 | 21 19 |
| terra    | 11 | 16 2  | 16 41 | 17 22 | 18 5  | 18 50 | 19 36 | 20 24 |
|          | 12 | 15 17 | 15 55 | 16 34 | 17 15 | 17 58 | 18 43 | 19 29 |
|          | 13 | 14 33 | 15 9  | 15 46 | 16 25 | 17 7  | 17 49 | 18 33 |
|          | 14 | 13 48 | 14 22 | 14 57 | 15 35 | 16 14 | 16 54 | 17 37 |
|          | 15 | 13 2  | 13 34 | 14 8  | 14 44 | 15 21 | 15 59 | 16 40 |
|          | 16 | 12 16 | 12 46 | 13 18 | 13 52 | 14 27 | 15 4  | 15 42 |
|          | 17 | 11 29 | 11 58 | 12 28 | 13 0  | 13 33 | 14 7  | 14 43 |
|          | 18 | 10 42 | 11 9  | 11 37 | 12 7  | 12 38 | 13 10 | 13 44 |
|          | 19 | 9 54  | 10 19 | 10 45 | 11 13 | 11 42 | 12 11 | 12 43 |
|          | 20 | 9 5   | 9 28  | 9 52  | 10 18 | 10 45 | 11 12 | 11 41 |
|          | 21 | 8 15  | 8 36  | 8 58  | 9 22  | 9 46  | 10 12 | 10 38 |
|          | 22 | 7 24  | 7 43  | 8 3   | 8 25  | 8 47  | 9 10  | 9 34  |
|          | 23 | 6 33  | 6 50  | 7 8   | 7 27  | 7 47  | 8 7   | 8 29  |
|          | 24 | 5 41  | 5 56  | 6 11  | 6 28  | 6 45  | 7 3   | 7 22  |
|          | 25 | 4 48  | 5 0   | 5 13  | 5 28  | 5 42  | 5 57  | 6 13  |
|          | 26 | 3 53  | 4 3   | 4 13  | 4 25  | 4 37  | 4 49  | 5 3   |
|          | 27 | 2 57  | 3 4   | 3 12  | 3 21  | 3 31  | 3 40  | 3 51  |
|          | 28 | 2 0   | 2 4   | 2 10  | 2 16  | 2 23  | 2 29  | 2 36  |
|          | 29 | 1 1   | 1 3   | 1 6   | 1 9   | 1 13  | 1 16  | 1 20  |
|          | 30 | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |
|          | 31 |       |       |       |       |       |       |       |
|          | 32 |       |       |       |       |       |       |       |



GRADVS LATITVDINIS.

[illegible]



TABVLA POSITIONVM AD 60.

| Elevatio | 52 | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     |
|----------|----|--------|--------|--------|--------|--------|--------|--------|--------|
| Decli    | 32 | 100 46 | 106 2  | 111 56 | 118 42 | 126 45 | 136 57 | 157 31 | 0 0    |
| natio    | 31 | 97 55  | 102 53 | 108 25 | 114 38 | 121 50 | 130 27 | 141 35 | 163 55 |
| BO       | 30 | 95 18  | 100 2  | 105 14 | 111 4  | 117 44 | 125 30 | 135 2  | 147 50 |
| RE       | 29 | 92 51  | 97 22  | 102 21 | 107 52 | 114 8  | 121 21 | 130 2  | 141 13 |
| ALIS     | 28 | 90 32  | 94 54  | 99 39  | 104 56 | 110 53 | 117 43 | 125 50 | 136 9  |
| supra    | 27 | 88 21  | 92 34  | 97 9   | 102 13 | 107 56 | 114 26 | 122 9  | 131 55 |
| terra    | 26 | 86 17  | 90 21  | 94 47  | 99 41  | 105 10 | 111 26 | 118 50 | 128 11 |
|          | 25 | 84 18  | 88 15  | 92 33  | 97 17  | 102 36 | 108 39 | 115 47 | 124 49 |
|          | 24 | 82 23  | 86 14  | 90 25  | 95 1   | 100 10 | 106 2  | 112 57 | 121 44 |
|          | 23 | 80 33  | 84 18  | 88 22  | 92 51  | 97 52  | 103 34 | 110 18 | 118 52 |
|          | 22 | 78 47  | 82 26  | 86 24  | 90 46  | 95 40  | 101 13 | 107 48 | 116 10 |
|          | 21 | 77 5   | 80 38  | 84 31  | 88 47  | 93 33  | 98 59  | 105 25 | 113 37 |
|          | 20 | 75 25  | 78 54  | 82 41  | 86 51  | 91 31  | 96 50  | 103 8  | 111 12 |
|          | 19 | 73 48  | 77 12  | 80 54  | 84 59  | 89 33  | 94 46  | 100 57 | 108 53 |
|          | 18 | 72 13  | 75 34  | 79 11  | 83 11  | 87 40  | 92 46  | 98 51  | 106 39 |
|          | 17 | 70 41  | 73 57  | 77 30  | 81 25  | 85 49  | 90 50  | 96 49  | 104 30 |
|          | 16 | 69 11  | 72 23  | 75 52  | 79 42  | 84 1   | 88 57  | 94 50  | 102 25 |
|          | 15 | 67 43  | 70 51  | 74 15  | 78 2   | 82 16  | 87 7   | 92 54  | 100 24 |
|          | 14 | 66 16  | 69 20  | 72 41  | 76 24  | 80 34  | 85 20  | 91 2   | 98 26  |
|          | 13 | 64 50  | 67 51  | 71 9   | 74 47  | 78 53  | 83 35  | 89 12  | 96 31  |
|          | 12 | 63 26  | 66 24  | 69 37  | 73 12  | 77 14  | 81 51  | 87 24  | 94 38  |
|          | 11 | 62 3   | 64 58  | 68 8   | 71 39  | 75 37  | 80 10  | 85 39  | 92 48  |
|          | 10 | 60 42  | 63 33  | 66 40  | 70 7   | 74 1   | 78 30  | 83 54  | 90 59  |
|          | 9  | 59 21  | 62 9   | 65 12  | 68 36  | 72 27  | 76 52  | 82 12  | 89 12  |
|          | 8  | 58 1   | 60 46  | 63 46  | 67 7   | 70 53  | 74 15  | 80 31  | 87 27  |
|          | 7  | 56 41  | 59 24  | 62 21  | 65 38  | 69 21  | 73 39  | 78 51  | 85 42  |
|          | 6  | 55 23  | 58 2   | 60 56  | 64 10  | 67 50  | 72 4   | 77 12  | 83 59  |
|          | 5  | 54 5   | 56 41  | 59 32  | 62 43  | 66 19  | 70 29  | 75 34  | 82 17  |
|          | 4  | 52 47  | 55 20  | 58 8   | 61 16  | 64 45  | 68 56  | 73 56  | 80 36  |
|          | 3  | 51 30  | 54 0   | 56 45  | 59 49  | 63 19  | 67 23  | 72 20  | 78 55  |
|          | 2  | 50 13  | 52 40  | 55 22  | 58 24  | 61 50  | 65 50  | 70 43  | 76 15  |
|          | 1  | 48 56  | 51 21  | 54 0   | 56 58  | 60 21  | 64 17  | 69 7   | 75 35  |
|          | 0  | 47 39  | 50 1   | 52 37  | 55 32  | 58 52  | 62 45  | 67 31  | 73 55  |



## GRADVS LATITVDINIS.

|  | 52 | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    | poli  |
|--|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|  | g  | g     | g     | g     | g     | g     | g     | g     | g     |       |
|  | 0  | 47 39 | 50 1  | 52 37 | 55 32 | 58 52 | 62 45 | 67 31 | 73 55 | 90 0  |
|  | 1  | 46 22 | 48 41 | 51 14 | 54 6  | 57 23 | 61 13 | 65 55 | 72 15 | 88 16 |
|  | 2  | 45 5  | 47 22 | 49 52 | 52 40 | 55 54 | 59 40 | 64 19 | 70 35 | 86 32 |
|  | 3  | 43 48 | 46 2  | 48 29 | 51 15 | 54 25 | 58 7  | 62 42 | 68 55 | 84 47 |
|  | 4  | 42 31 | 44 42 | 47 6  | 49 48 | 52 55 | 56 34 | 61 6  | 67 14 | 83 3  |
|  | 5  | 41 13 | 43 21 | 45 42 | 48 21 | 51 25 | 55 1  | 59 28 | 65 33 | 81 17 |
|  | 6  | 39 55 | 42 0  | 44 18 | 46 54 | 49 54 | 53 26 | 57 50 | 63 51 | 79 32 |
|  | 7  | 38 37 | 40 38 | 42 53 | 45 26 | 48 23 | 51 51 | 56 11 | 62 8  | 77 43 |
|  | 8  | 37 17 | 39 16 | 41 28 | 43 57 | 46 51 | 50 15 | 54 31 | 60 23 | 75 55 |
|  | 9  | 35 57 | 37 53 | 40 2  | 42 28 | 45 17 | 48 38 | 52 50 | 58 38 | 74 5  |
|  | 10 | 34 36 | 36 29 | 38 34 | 40 57 | 43 43 | 47 0  | 51 8  | 56 51 | 72 13 |
|  | 11 | 33 15 | 35 4  | 37 6  | 39 25 | 42 7  | 45 20 | 49 23 | 55 2  | 70 19 |
|  | 12 | 31 52 | 33 38 | 35 37 | 37 52 | 40 30 | 43 39 | 47 38 | 53 12 | 68 24 |
|  | 13 | 30 28 | 32 11 | 34 5  | 36 17 | 38 51 | 41 55 | 45 50 | 51 19 | 66 26 |
|  | 14 | 29 2  | 30 42 | 32 33 | 34 40 | 37 10 | 40 10 | 44 0  | 49 24 | 64 25 |
|  | 15 | 27 35 | 29 11 | 30 59 | 33 2  | 35 28 | 38 23 | 42 8  | 47 26 | 62 21 |
|  | 16 | 26 7  | 27 39 | 29 22 | 31 22 | 33 43 | 36 33 | 40 12 | 45 25 | 60 13 |
|  | 17 | 24 37 | 26 5  | 27 44 | 29 39 | 31 55 | 34 40 | 38 13 | 43 20 | 58 1  |
|  | 18 | 23 5  | 24 28 | 26 3  | 27 53 | 30 4  | 32 44 | 36 11 | 41 11 | 55 45 |
|  | 19 | 21 30 | 22 50 | 24 20 | 26 5  | 28 11 | 30 44 | 34 5  | 38 57 | 53 23 |
|  | 20 | 19 53 | 21 8  | 22 33 | 24 13 | 26 13 | 28 40 | 31 54 | 36 38 | 50 54 |
|  | 21 | 18 13 | 19 24 | 20 43 | 22 17 | 24 11 | 26 41 | 29 38 | 34 13 | 48 20 |
|  | 22 | 16 31 | 17 36 | 18 50 | 20 18 | 22 4  | 24 17 | 27 14 | 31 40 | 45 35 |
|  | 23 | 14 45 | 15 44 | 16 52 | 18 13 | 19 52 | 21 56 | 24 44 | 28 58 | 42 40 |
|  | 24 | 12 55 | 13 48 | 14 49 | 16 3  | 17 34 | 19 28 | 22 5  | 26 6  | 39 33 |
|  | 25 | 11 0  | 11 47 | 12 41 | 13 47 | 15 8  | 16 51 | 19 15 | 23 1  | 36 8  |
|  | 26 | 9 1   | 9 41  | 10 27 | 11 23 | 12 34 | 14 4  | 16 12 | 19 39 | 32 21 |
|  | 27 | 6 57  | 7 28  | 8 5   | 8 51  | 9 48  | 11 4  | 12 53 | 15 55 | 28 3  |
|  | 28 | 4 46  | 5 8   | 5 35  | 6 8   | 6 51  | 7 47  | 9 12  | 11 41 | 22 56 |
|  | 29 | 2 27  | 2 40  | 2 53  | 3 12  | 3 36  | 4 9   | 5 0   | 6 37  | 16 14 |
|  | 30 | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |
|  | 31 |       |       |       |       |       |       |       |       |       |
|  | 32 |       |       |       |       |       |       |       |       |       |



# TABVLA POSITIONVM AD 63.

| Eleuatio | I  |      | 2    |      | 3    |      | 4    |      | 5    |   | 6 |   | 7 |   | 8 |   |
|----------|----|------|------|------|------|------|------|------|------|---|---|---|---|---|---|---|
|          | 6  | 5    | 4    | 3    | 2    | 1    | 0    | 1    | 2    | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Decli    | 32 | 1 8  | 2 16 | 3 25 | 4 32 | 5 41 | 6 50 | 7 59 | 8 57 |   |   |   |   |   |   |   |
|          | 31 | 1 7  | 2 13 | 3 20 | 4 26 | 5 34 | 6 41 | 7 49 | 8 57 |   |   |   |   |   |   |   |
| natio    | 30 | 1 6  | 2 10 | 3 16 | 4 21 | 5 27 | 6 33 | 7 39 | 8 45 |   |   |   |   |   |   |   |
|          | 29 | 1 4  | 2 8  | 3 12 | 4 15 | 5 20 | 6 24 | 7 29 | 8 34 |   |   |   |   |   |   |   |
| BORE     | 28 | 1 3  | 2 5  | 3 8  | 4 10 | 5 13 | 6 16 | 7 20 | 8 23 |   |   |   |   |   |   |   |
|          | 27 | 1 2  | 2 2  | 3 4  | 4 5  | 5 6  | 6 8  | 7 10 | 8 12 |   |   |   |   |   |   |   |
| ALIS     | 26 | 1 0  | 2 0  | 3 0  | 3 59 | 5 0  | 6 0  | 7 1  | 8 2  |   |   |   |   |   |   |   |
|          | 25 | 0 59 | 1 57 | 2 56 | 3 54 | 4 53 | 5 53 | 6 52 | 7 51 |   |   |   |   |   |   |   |
| supra    | 24 | 0 58 | 1 54 | 2 52 | 3 49 | 4 47 | 5 45 | 6 43 | 7 41 |   |   |   |   |   |   |   |
|          | 23 | 0 56 | 1 52 | 2 49 | 3 44 | 4 41 | 5 37 | 6 34 | 7 31 |   |   |   |   |   |   |   |
| terram   | 22 | 0 55 | 1 50 | 2 45 | 3 39 | 4 35 | 5 30 | 6 26 | 7 21 |   |   |   |   |   |   |   |
|          | 21 | 0 54 | 1 47 | 2 41 | 3 34 | 4 28 | 5 23 | 6 17 | 7 12 |   |   |   |   |   |   |   |
|          | 20 | 0 53 | 1 45 | 2 38 | 3 29 | 4 22 | 5 16 | 6 9  | 7 2  |   |   |   |   |   |   |   |
|          | 19 | 0 52 | 1 42 | 2 34 | 3 25 | 4 17 | 5 8  | 6 0  | 6 52 |   |   |   |   |   |   |   |
| ET       | 18 | 0 50 | 1 40 | 2 31 | 3 20 | 4 11 | 5 1  | 5 52 | 6 43 |   |   |   |   |   |   |   |
|          | 17 | 0 49 | 1 38 | 2 27 | 3 16 | 4 5  | 4 54 | 5 44 | 6 34 |   |   |   |   |   |   |   |
| AVS      | 16 | 0 48 | 1 35 | 2 24 | 3 11 | 3 59 | 4 48 | 5 36 | 6 25 |   |   |   |   |   |   |   |
|          | 15 | 0 47 | 1 33 | 2 20 | 3 6  | 3 54 | 4 41 | 5 28 | 6 16 |   |   |   |   |   |   |   |
| TRA      | 14 | 0 46 | 1 31 | 2 17 | 3 2  | 3 48 | 4 34 | 5 20 | 6 7  |   |   |   |   |   |   |   |
|          | 13 | 0 45 | 1 29 | 2 14 | 2 58 | 3 42 | 4 27 | 5 12 | 5 58 |   |   |   |   |   |   |   |
| LIS      | 12 | 0 44 | 1 26 | 2 10 | 2 53 | 3 37 | 4 21 | 5 5  | 5 49 |   |   |   |   |   |   |   |
|          | 11 | 0 43 | 1 24 | 2 7  | 2 49 | 3 31 | 4 14 | 4 57 | 5 40 |   |   |   |   |   |   |   |
| sub      | 10 | 0 42 | 1 22 | 2 4  | 2 44 | 3 26 | 4 8  | 4 49 | 5 31 |   |   |   |   |   |   |   |
|          | 9  | 0 40 | 1 20 | 2 1  | 2 40 | 3 21 | 4 1  | 4 42 | 5 22 |   |   |   |   |   |   |   |
| terra.   | 8  | 0 39 | 1 18 | 1 57 | 2 36 | 3 15 | 3 55 | 4 34 | 5 14 |   |   |   |   |   |   |   |
|          | 7  | 0 38 | 1 16 | 1 54 | 2 32 | 3 10 | 3 48 | 4 27 | 5 5  |   |   |   |   |   |   |   |
|          | 6  | 0 37 | 1 14 | 1 51 | 2 27 | 3 5  | 3 42 | 4 19 | 4 57 |   |   |   |   |   |   |   |
|          | 5  | 0 36 | 1 11 | 1 48 | 2 23 | 2 59 | 3 36 | 4 12 | 4 48 |   |   |   |   |   |   |   |
|          | 4  | 0 35 | 1 9  | 1 45 | 2 19 | 2 54 | 3 29 | 4 5  | 4 40 |   |   |   |   |   |   |   |
|          | 3  | 0 34 | 1 7  | 1 41 | 2 15 | 2 49 | 3 23 | 3 57 | 4 31 |   |   |   |   |   |   |   |
|          | 2  | 0 33 | 1 5  | 1 38 | 2 10 | 2 43 | 3 17 | 3 50 | 4 23 |   |   |   |   |   |   |   |
|          | 1  | 0 32 | 1 3  | 1 35 | 2 6  | 2 38 | 3 10 | 3 42 | 4 14 |   |   |   |   |   |   |   |
|          | 0  | 0 31 | 1 1  | 1 32 | 2 2  | 2 33 | 3 4  | 3 35 | 4 6  |   |   |   |   |   |   |   |



## GRADVS LATITVDINIS.

|    | 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| ̄  | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄    |
| 32 | 10 19 | 11 29 | 12 40 | 13 51 | 15 3  | 16 16 | 17 29 | 18 43 | 19 59 |      |
| 31 | 10 6  | 11 14 | 12 24 | 13 33 | 14 44 | 15 55 | 17 7  | 18 19 | 19 33 |      |
| 30 | 9 53  | 11 0  | 12 8  | 13 16 | 14 25 | 15 35 | 16 45 | 17 56 | 19 8  |      |
| 29 | 9 40  | 10 46 | 11 52 | 12 59 | 14 6  | 15 15 | 16 23 | 17 33 | 18 43 |      |
| 28 | 9 28  | 10 32 | 11 37 | 12 42 | 13 48 | 14 55 | 16 2  | 17 10 | 18 19 |      |
| 27 | 9 16  | 10 18 | 11 22 | 12 26 | 13 30 | 14 36 | 15 42 | 16 48 | 17 56 |      |
| 26 | 9 4   | 10 5  | 11 7  | 12 10 | 13 13 | 14 17 | 15 22 | 16 26 | 17 33 |      |
| 25 | 8 52  | 9 52  | 10 53 | 11 54 | 12 56 | 13 59 | 15 2  | 16 5  | 17 10 |      |
| 24 | 8 41  | 9 39  | 10 39 | 11 39 | 12 39 | 13 40 | 14 42 | 15 44 | 16 47 |      |
| 23 | 8 29  | 9 27  | 10 25 | 11 24 | 12 22 | 13 22 | 14 23 | 15 23 | 16 25 |      |
| 22 | 8 18  | 9 14  | 10 11 | 11 9  | 12 6  | 13 5  | 14 4  | 15 3  | 16 4  |      |
| 21 | 8 7   | 9 2   | 9 58  | 10 54 | 11 50 | 12 48 | 13 45 | 14 43 | 15 42 |      |
| 20 | 7 56  | 8 50  | 9 44  | 10 39 | 11 34 | 12 30 | 13 27 | 14 23 | 15 21 |      |
| 19 | 7 46  | 8 38  | 9 31  | 10 25 | 11 19 | 12 13 | 13 9  | 14 4  | 15 1  |      |
| 18 | 7 35  | 8 26  | 9 18  | 10 11 | 11 3  | 11 57 | 12 51 | 13 45 | 14 40 |      |
| 17 | 7 25  | 8 14  | 9 5   | 9 57  | 10 48 | 11 40 | 12 33 | 13 26 | 14 20 |      |
| 16 | 7 14  | 8 3   | 8 53  | 9 43  | 10 33 | 11 24 | 12 15 | 13 7  | 14 0  |      |
| 15 | 7 4   | 7 51  | 8 40  | 9 29  | 10 18 | 11 8  | 11 58 | 12 48 | 13 40 |      |
| 14 | 6 54  | 7 40  | 8 28  | 9 15  | 10 3  | 10 52 | 11 41 | 12 30 | 13 20 |      |
| 13 | 6 44  | 7 29  | 8 15  | 9 2   | 9 48  | 10 36 | 11 24 | 12 12 | 13 1  |      |
| 12 | 6 34  | 7 18  | 8 3   | 8 48  | 9 34  | 10 20 | 11 7  | 11 54 | 12 42 |      |
| 11 | 6 24  | 7 7   | 7 51  | 8 35  | 9 19  | 10 5  | 10 50 | 11 36 | 12 22 |      |
| 10 | 6 14  | 6 56  | 7 39  | 8 22  | 9 5   | 9 49  | 10 33 | 11 18 | 12 3  |      |
| 9  | 6 4   | 6 45  | 7 27  | 8 9   | 8 51  | 9 34  | 10 17 | 11 0  | 11 45 |      |
| 8  | 5 54  | 6 34  | 7 15  | 7 56  | 8 37  | 9 18  | 10 0  | 10 43 | 11 26 |      |
| 7  | 5 45  | 6 23  | 7 3   | 7 43  | 8 22  | 9 3   | 9 44  | 10 25 | 11 7  |      |
| 6  | 5 35  | 6 13  | 6 51  | 7 30  | 8 8   | 8 48  | 9 28  | 10 8  | 10 48 |      |
| 5  | 5 26  | 6 2   | 6 39  | 7 17  | 7 54  | 8 33  | 9 12  | 9 50  | 10 30 |      |
| 4  | 5 16  | 5 51  | 6 28  | 7 4   | 7 41  | 8 18  | 8 55  | 9 33  | 10 12 |      |
| 3  | 5 7   | 5 41  | 6 16  | 6 51  | 7 27  | 8 3   | 8 39  | 9 16  | 5 53  |      |
| 2  | 4 57  | 5 30  | 6 4   | 6 38  | 7 13  | 9 48  | 8 23  | 8 58  | 9 35  |      |
| 1  | 4 47  | 5 20  | 5 53  | 6 26  | 6 59  | 7 33  | 8 7   | 8 41  | 9 16  |      |
| 0  | 4 38  | 5 9   | 5 41  | 6 13  | 6 45  | 7 18  | 7 51  | 8 24  | 8 58  |      |



# TABVL APOSITIONVM AD 63

| Eleuatio | I  | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|----------|----|---|---|---|---|---|---|---|
|          | 0  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|          | 0  | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 1  | 0 | 1 | 1 | 2 | 2 | 3 | 3 |
|          | 2  | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 3  | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 4  | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 5  | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 6  | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 7  | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 8  | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 9  | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 10 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 11 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 12 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 13 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 14 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 15 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 16 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 17 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 18 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 19 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 20 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 21 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 22 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 23 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 24 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 25 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 26 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 27 | 0 | 1 | 2 | 2 | 3 | 3 | 4 |
|          | 28 |   |   |   |   |   |   |   |
|          | 29 |   |   |   |   |   |   |   |
|          | 30 |   |   |   |   |   |   |   |
|          | 31 |   |   |   |   |   |   |   |
|          | 32 |   |   |   |   |   |   |   |



GRADVS LATITVDINIS.

|    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   |
|----|------|------|------|------|------|------|------|------|------|
| 0  | 4 38 | 5 9  | 5 41 | 6 13 | 6 45 | 7 18 | 7 51 | 8 24 | 8 58 |
| 1  | 4 29 | 4 58 | 5 29 | 6 0  | 6 31 | 7 3  | 7 35 | 8 7  | 8 40 |
| 2  | 4 19 | 4 48 | 5 18 | 5 48 | 6 17 | 6 48 | 7 19 | 7 50 | 8 21 |
| 3  | 4 9  | 4 37 | 5 6  | 5 35 | 6 3  | 6 33 | 7 3  | 7 32 | 8 3  |
| 4  | 4 0  | 4 27 | 4 54 | 5 22 | 5 49 | 6 18 | 6 47 | 7 15 | 7 44 |
| 5  | 3 50 | 4 16 | 4 43 | 5 9  | 5 36 | 6 3  | 6 30 | 6 58 | 7 26 |
| 6  | 3 41 | 4 5  | 4 31 | 4 56 | 5 22 | 5 48 | 6 14 | 6 40 | 7 8  |
| 7  | 3 31 | 3 55 | 4 19 | 4 43 | 5 8  | 5 33 | 5 58 | 6 23 | 6 49 |
| 8  | 3 22 | 3 44 | 4 7  | 4 30 | 4 53 | 5 18 | 5 42 | 6 5  | 6 30 |
| 9  | 3 12 | 3 33 | 3 55 | 4 17 | 4 39 | 5 2  | 5 25 | 5 48 | 6 11 |
| 10 | 3 2  | 3 22 | 3 43 | 4 4  | 4 25 | 4 47 | 5 9  | 5 30 | 5 53 |
| 11 | 2 52 | 3 11 | 3 31 | 3 51 | 4 11 | 4 31 | 4 52 | 5 12 | 5 34 |
| 12 | 2 42 | 3 0  | 3 19 | 3 38 | 3 56 | 4 16 | 4 35 | 4 54 | 5 14 |
| 13 | 2 32 | 2 49 | 3 7  | 3 24 | 3 42 | 4 0  | 4 18 | 4 36 | 4 55 |
| 14 | 2 22 | 2 38 | 2 54 | 3 11 | 3 27 | 3 41 | 4 1  | 4 18 | 4 36 |
| 15 | 2 12 | 2 27 | 2 42 | 2 57 | 3 12 | 3 28 | 3 44 | 4 0  | 4 16 |
| 16 | 2 2  | 2 15 | 2 29 | 2 43 | 2 57 | 3 12 | 3 27 | 3 41 | 3 56 |
| 17 | 1 51 | 2 4  | 2 17 | 2 29 | 2 42 | 2 56 | 3 9  | 3 22 | 3 36 |
| 18 | 1 41 | 1 52 | 2 4  | 2 15 | 2 27 | 2 39 | 2 51 | 3 3  | 3 16 |
| 19 | 1 30 | 1 40 | 1 51 | 2 1  | 2 11 | 2 23 | 2 33 | 2 44 | 2 55 |
| 20 | 1 20 | 1 28 | 1 38 | 1 47 | 1 56 | 2 6  | 2 15 | 2 25 | 2 35 |
| 21 | 1 9  | 1 16 | 1 24 | 1 32 | 1 40 | 1 48 | 1 57 | 2 5  | 2 14 |
| 22 | 0 58 | 1 4  | 1 11 | 1 17 | 1 24 | 1 31 | 1 38 | 1 45 | 1 52 |
| 23 | 5 47 | 0 51 | 0 57 | 1 2  | 1 8  | 1 14 | 1 19 | 1 25 | 1 31 |
| 24 | 0 35 | 0 39 | 0 43 | 0 47 | 0 51 | 0 56 | 1 0  | 1 4  | 1 9  |
| 25 | 0 24 | 0 26 | 0 29 | 0 32 | 0 34 | 0 37 | 0 40 | 0 43 | 0 46 |
| 26 | 0 12 | 0 13 | 0 15 | 0 16 | 0 17 | 0 19 | 0 20 | 0 22 | 0 23 |
| 27 | 0 0  | 0 0  | 0 0  | 0 0  | 0 0  | 0 0  | 0 0  | 0 0  | 0 0  |
| 28 |      |      |      |      |      |      |      |      |      |
| 29 |      |      |      |      |      |      |      |      |      |
| 30 |      |      |      |      |      |      |      |      |      |
| 31 |      |      |      |      |      |      |      |      |      |
| 32 |      |      |      |      |      |      |      |      |      |

poli



# TABVLA POSITIONVM AD 63

| Eleuatio | 18 |    |    | 19 |    |    | 20 |    |    | 21 |    |    | 22 |    |    | 23 |    |   | 24 |   |   | 25 |  |  |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|----|---|---|----|--|--|
|          | ̄  | ̄  | /  | ̄  | /  | ̄  | /  | ̄  | /  | ̄  | /  | ̄  | /  | ̄  | /  | ̄  | /  | ̄ | /  | ̄ | / |    |  |  |
|          | 32 | 21 | 15 | 22 | 31 | 23 | 50 | 25 | 9  | 26 | 29 | 27 | 52 | 29 | 16 | 30 | 41 |   |    |   |   |    |  |  |
|          | 31 | 20 | 48 | 22 | 2  | 23 | 19 | 24 | 36 | 25 | 55 | 27 | 16 | 28 | 38 | 30 | 1  |   |    |   |   |    |  |  |
| Decli    | 30 | 20 | 21 | 21 | 34 | 22 | 49 | 24 | 4  | 25 | 21 | 26 | 40 | 28 | 1  | 29 | 22 |   |    |   |   |    |  |  |
|          | 29 | 19 | 55 | 21 | 6  | 22 | 19 | 23 | 33 | 24 | 48 | 26 | 6  | 27 | 24 | 28 | 44 |   |    |   |   |    |  |  |
| natio    | 28 | 19 | 29 | 20 | 39 | 21 | 50 | 23 | 3  | 24 | 16 | 25 | 32 | 26 | 49 | 28 | 6  |   |    |   |   |    |  |  |
|          | 27 | 19 | 4  | 20 | 12 | 21 | 22 | 22 | 33 | 23 | 45 | 24 | 58 | 26 | 14 | 27 | 30 |   |    |   |   |    |  |  |
| BORR     | 26 | 18 | 39 | 19 | 46 | 20 | 55 | 22 | 3  | 23 | 14 | 24 | 26 | 25 | 40 | 26 | 54 |   |    |   |   |    |  |  |
|          | 25 | 18 | 15 | 19 | 20 | 20 | 27 | 22 | 35 | 22 | 44 | 23 | 54 | 25 | 6  | 26 | 19 |   |    |   |   |    |  |  |
| ALIS     | 24 | 17 | 51 | 18 | 55 | 20 | 0  | 21 | 6  | 22 | 14 | 23 | 23 | 24 | 33 | 25 | 44 |   |    |   |   |    |  |  |
|          | 23 | 17 | 28 | 18 | 30 | 19 | 34 | 20 | 38 | 21 | 45 | 22 | 52 | 24 | 1  | 25 | 10 |   |    |   |   |    |  |  |
| supra    | 22 | 17 | 5  | 18 | 6  | 19 | 8  | 20 | 11 | 21 | 16 | 22 | 22 | 23 | 29 | 24 | 37 |   |    |   |   |    |  |  |
|          | 21 | 16 | 42 | 17 | 42 | 18 | 43 | 19 | 44 | 20 | 47 | 21 | 52 | 22 | 57 | 24 | 4  |   |    |   |   |    |  |  |
| terram   | 20 | 16 | 19 | 17 | 18 | 18 | 18 | 19 | 18 | 20 | 19 | 21 | 22 | 22 | 26 | 23 | 31 |   |    |   |   |    |  |  |
|          | 19 | 15 | 57 | 16 | 55 | 17 | 53 | 18 | 52 | 19 | 52 | 20 | 53 | 21 | 56 | 12 | 59 |   |    |   |   |    |  |  |
|          | 18 | 15 | 36 | 16 | 31 | 17 | 28 | 18 | 26 | 19 | 25 | 20 | 25 | 21 | 26 | 22 | 28 |   |    |   |   |    |  |  |
|          | 17 | 15 | 14 | 16 | 8  | 17 | 4  | 18 | 0  | 18 | 58 | 19 | 56 | 20 | 56 | 21 | 57 |   |    |   |   |    |  |  |
| ET       | 16 | 14 | 53 | 15 | 46 | 16 | 40 | 17 | 35 | 18 | 31 | 19 | 28 | 20 | 27 | 21 | 26 |   |    |   |   |    |  |  |
|          | 15 | 14 | 32 | 15 | 24 | 16 | 17 | 17 | 10 | 18 | 5  | 19 | 1  | 19 | 58 | 20 | 56 |   |    |   |   |    |  |  |
| AVS      | 14 | 14 | 11 | 15 | 1  | 15 | 53 | 16 | 46 | 17 | 39 | 18 | 34 | 19 | 29 | 20 | 26 |   |    |   |   |    |  |  |
|          | 13 | 13 | 50 | 14 | 40 | 15 | 30 | 16 | 21 | 17 | 13 | 18 | 7  | 19 | 1  | 19 | 56 |   |    |   |   |    |  |  |
| TRA      | 12 | 13 | 30 | 14 | 18 | 15 | 7  | 15 | 57 | 16 | 48 | 17 | 40 | 18 | 33 | 19 | 26 |   |    |   |   |    |  |  |
|          | 11 | 12 | 9  | 13 | 56 | 14 | 44 | 15 | 33 | 16 | 22 | 17 | 13 | 18 | 5  | 18 | 57 |   |    |   |   |    |  |  |
| LIS      | 10 | 12 | 49 | 13 | 35 | 14 | 22 | 15 | 9  | 15 | 57 | 16 | 47 | 17 | 37 | 18 | 28 |   |    |   |   |    |  |  |
|          | 9  | 12 | 29 | 13 | 14 | 13 | 49 | 14 | 45 | 15 | 32 | 16 | 20 | 17 | 10 | 17 | 59 |   |    |   |   |    |  |  |
| sub      | 8  | 11 | 9  | 12 | 52 | 13 | 37 | 14 | 22 | 15 | 7  | 15 | 54 | 16 | 42 | 17 | 30 |   |    |   |   |    |  |  |
|          | 7  | 11 | 49 | 12 | 31 | 13 | 15 | 13 | 58 | 14 | 43 | 15 | 28 | 16 | 15 | 17 | 2  |   |    |   |   |    |  |  |
| terra    | 6  | 11 | 29 | 12 | 10 | 12 | 53 | 13 | 35 | 14 | 18 | 15 | 2  | 15 | 48 | 16 | 34 |   |    |   |   |    |  |  |
|          | 5  | 11 | 10 | 11 | 50 | 12 | 30 | 13 | 11 | 13 | 54 | 14 | 37 | 15 | 21 | 16 | 5  |   |    |   |   |    |  |  |
|          | 4  | 10 | 50 | 11 | 29 | 12 | 8  | 12 | 48 | 13 | 29 | 14 | 11 | 14 | 54 | 15 | 37 |   |    |   |   |    |  |  |
|          | 3  | 10 | 41 | 11 | 8  | 11 | 47 | 12 | 25 | 13 | 5  | 13 | 46 | 14 | 27 | 15 | 9  |   |    |   |   |    |  |  |
|          | 2  | 10 | 11 | 10 | 47 | 11 | 25 | 12 | 2  | 12 | 41 | 13 | 20 | 14 | 0  | 14 | 41 |   |    |   |   |    |  |  |
|          | 1  | 9  | 51 | 10 | 27 | 11 | 3  | 11 | 39 | 12 | 16 | 12 | 54 | 13 | 34 | 14 | 13 |   |    |   |   |    |  |  |
|          | 0  | 9  | 32 | 10 | 6  | 10 | 41 | 11 | 16 | 11 | 52 | 12 | 29 | 13 | 7  | 13 | 45 |   |    |   |   |    |  |  |



## GRADVS LATITVDINIS.

|    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 32 | 32 9  | 33 38 | 35 8  | 36 41 | 38 16 | 39 53 | 41 33 | 43 15 | 45 2  |      |
| 31 | 31 26 | 32 54 | 34 22 | 35 52 | 37 25 | 39 0  | 40 37 | 42 17 | 44 1  |      |
| 30 | 30 45 | 32 10 | 33 37 | 35 5  | 36 35 | 38 8  | 39 43 | 41 20 | 43 1  |      |
| 29 | 30 5  | 31 28 | 32 52 | 34 19 | 35 47 | 37 17 | 38 50 | 40 25 | 42 3  |      |
| 28 | 29 26 | 30 47 | 32 9  | 33 33 | 35 0  | 36 28 | 37 58 | 39 31 | 41 7  |      |
| 27 | 28 47 | 30 7  | 31 27 | 32 49 | 34 13 | 35 40 | 37 8  | 38 38 | 40 12 |      |
| 26 | 28 10 | 29 27 | 30 46 | 32 6  | 33 28 | 34 52 | 36 19 | 37 47 | 39 18 |      |
| 25 | 27 33 | 28 49 | 30 5  | 31 24 | 32 44 | 34 6  | 35 30 | 36 57 | 38 26 |      |
| 23 | 26 57 | 28 11 | 29 26 | 30 32 | 32 1  | 33 21 | 34 43 | 36 7  | 37 35 |      |
| 24 | 26 21 | 27 33 | 28 46 | 30 2  | 31 18 | 32 37 | 33 57 | 35 19 | 36 44 |      |
| 22 | 25 46 | 26 57 | 28 8  | 29 21 | 30 36 | 31 53 | 33 11 | 34 32 | 35 55 |      |
| 21 | 25 11 | 26 21 | 27 30 | 28 42 | 29 55 | 31 10 | 32 27 | 33 45 | 35 6  |      |
| 20 | 24 38 | 25 45 | 26 53 | 28 3  | 29 15 | 30 28 | 31 43 | 32 59 | 34 19 |      |
| 19 | 24 4  | 25 10 | 26 17 | 27 25 | 28 35 | 29 46 | 30 59 | 32 14 | 33 32 |      |
| 18 | 23 31 | 24 36 | 25 41 | 26 48 | 27 56 | 29 6  | 30 17 | 31 30 | 32 46 |      |
| 17 | 22 59 | 24 2  | 25 5  | 26 10 | 27 17 | 28 25 | 29 35 | 30 46 | 32 0  |      |
| 16 | 22 27 | 23 28 | 24 30 | 25 33 | 26 39 | 27 45 | 28 53 | 30 3  | 31 15 |      |
| 15 | 21 55 | 22 55 | 23 55 | 24 57 | 26 1  | 27 6  | 28 12 | 29 20 | 30 31 |      |
| 14 | 21 25 | 22 22 | 23 21 | 29 21 | 25 24 | 26 27 | 27 32 | 28 38 | 29 47 |      |
| 13 | 20 52 | 21 49 | 22 47 | 23 46 | 24 47 | 25 48 | 26 52 | 27 56 | 29 4  |      |
| 12 | 20 21 | 21 17 | 22 13 | 23 11 | 24 10 | 25 10 | 26 12 | 27 15 | 28 21 |      |
| 11 | 19 50 | 20 45 | 21 40 | 22 36 | 23 34 | 24 32 | 25 33 | 26 34 | 27 38 |      |
| 10 | 19 20 | 20 13 | 21 7  | 22 2  | 22 58 | 23 55 | 24 54 | 25 54 | 26 56 |      |
| 9  | 18 50 | 19 42 | 20 34 | 21 27 | 22 22 | 23 18 | 24 15 | 25 13 | 26 14 |      |
| 8  | 18 20 | 19 10 | 20 1  | 20 53 | 21 46 | 22 41 | 23 36 | 24 33 | 25 32 |      |
| 7  | 17 50 | 18 39 | 19 29 | 20 19 | 21 11 | 22 4  | 22 58 | 23 53 | 24 51 |      |
| 6  | 17 20 | 18 8  | 18 56 | 19 45 | 20 36 | 21 27 | 22 20 | 23 14 | 24 10 |      |
| 5  | 16 51 | 17 37 | 18 24 | 19 12 | 20 1  | 20 51 | 21 42 | 22 34 | 23 29 |      |
| 4  | 16 21 | 17 7  | 17 52 | 18 38 | 19 26 | 20 14 | 21 4  | 21 55 | 22 48 |      |
| 3  | 15 52 | 16 36 | 17 20 | 18 5  | 18 51 | 19 38 | 20 17 | 21 16 | 22 8  |      |
| 2  | 15 23 | 16 5  | 16 48 | 17 22 | 18 16 | 19 2  | 19 49 | 20 37 | 21 27 |      |
| 1  | 14 53 | 15 35 | 16 16 | 16 58 | 17 42 | 18 26 | 19 11 | 19 58 | 20 46 |      |
| 0  | 14 24 | 15 4  | 15 44 | 16 25 | 17 7  | 17 50 | 18 34 | 19 19 | 20 6  |      |



# TABVLA POSITIONVM AD 63.

| Eleuatio |    | 18   | 19    | 20    | 21    | 22    | 23    | 24    | 25    |
|----------|----|------|-------|-------|-------|-------|-------|-------|-------|
|          | ̄  | ̄    | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     |
| Decli    | 0  | 9 32 | 10 16 | 10 41 | 11 16 | 11 52 | 12 29 | 13 7  | 13 45 |
| natio    | 1  | 9 13 | 9 45  | 10 19 | 10 53 | 11 28 | 12 4  | 12 40 | 13 17 |
|          | 2  | 8 53 | 9 25  | 9 57  | 10 30 | 11 3  | 11 38 | 12 14 | 12 49 |
|          | 3  | 8 33 | 9 4   | 9 35  | 10 7  | 10 39 | 11 12 | 11 47 | 12 25 |
| AVS      | 4  | 8 14 | 8 43  | 9 14  | 9 44  | 10 15 | 10 47 | 11 20 | 11 53 |
|          | 5  | 7 54 | 8 22  | 8 52  | 9 21  | 9 50  | 10 21 | 10 53 | 11 25 |
| TRA      | 6  | 7 35 | 8 2   | 8 29  | 8 57  | 9 26  | 9 56  | 10 26 | 10 56 |
|          | 7  | 7 15 | 7 41  | 8 7   | 8 34  | 9 1   | 9 30  | 9 59  | 10 28 |
| LIS      | 8  | 6 55 | 7 20  | 7 46  | 8 10  | 8 37  | 9 4   | 9 32  | 10 0  |
|          | 9  | 6 35 | 6 58  | 7 23  | 7 47  | 8 12  | 8 38  | 9 4   | 9 31  |
| supra    | 10 | 6 15 | 6 37  | 7 0   | 7 23  | 7 47  | 8 11  | 8 37  | 9 2   |
|          | 11 | 5 55 | 6 16  | 6 38  | 6 59  | 7 22  | 7 45  | 8 9   | 8 33  |
| terram   | 12 | 5 34 | 5 54  | 6 15  | 6 35  | 6 56  | 7 18  | 7 41  | 8 4   |
|          | 13 | 5 14 | 5 32  | 5 52  | 6 11  | 6 31  | 6 51  | 7 13  | 7 34  |
|          | 14 | 4 53 | 5 11  | 5 29  | 5 46  | 6 5   | 6 24  | 6 45  | 7 4   |
|          | 15 | 4 32 | 4 48  | 5 5   | 5 22  | 5 39  | 5 57  | 6 15  | 6 34  |
| ET       | 16 | 4 11 | 4 26  | 4 42  | 4 57  | 5 13  | 5 30  | 5 47  | 6 4   |
|          | 17 | 3 50 | 4 4   | 4 18  | 4 32  | 4 46  | 5 2   | 5 18  | 5 33  |
| BORE     | 18 | 3 28 | 3 41  | 3 54  | 4 6   | 4 19  | 4 33  | 4 48  | 5 2   |
|          | 19 | 3 7  | 3 17  | 3 29  | 3 40  | 3 52  | 4 5   | 4 18  | 4 31  |
| ALIS     | 20 | 2 45 | 2 54  | 3 4   | 3 14  | 3 25  | 3 36  | 3 48  | 4 1   |
|          | 21 | 2 22 | 2 30  | 2 39  | 2 48  | 2 57  | 3 6   | 3 17  | 3 26  |
| sub      | 22 | 1 59 | 2 6   | 2 14  | 2 21  | 2 28  | 2 36  | 2 45  | 2 53  |
|          | 23 | 1 36 | 1 42  | 1 48  | 1 54  | 1 59  | 2 6   | 2 13  | 2 20  |
| terra    | 24 | 1 13 | 1 17  | 1 22  | 1 26  | 1 30  | 1 35  | 1 41  | 1 46  |
|          | 25 | 0 49 | 0 52  | 0 55  | 0 57  | 1 0   | 0 56  | 1 8   | 1 11  |
|          | 26 | 0 25 | 0 26  | 0 27  | 0 29  | 0 30  | 0 32  | 0 34  | 0 36  |
|          | 27 | 0 0  | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |
|          | 28 |      |       |       |       |       |       |       |       |
|          | 29 |      |       |       |       |       |       |       |       |
|          | 30 |      |       |       |       |       |       |       |       |
|          | 31 |      |       |       |       |       |       |       |       |
|          | 32 |      |       |       |       |       |       |       |       |



## GRADVS LATITVDINIS.

|    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| ̄  | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄    |
| 0  | 14 24 | 15 4  | 15 44 | 16 25 | 17 7  | 17 50 | 18 34 | 19 19 | 20 6  |      |
| 1  | 13 55 | 14 33 | 15 12 | 15 52 | 16 32 | 17 14 | 17 57 | 18 40 | 19 26 |      |
| 2  | 13 25 | 14 3  | 14 40 | 15 18 | 15 58 | 16 38 | 17 19 | 18 1  | 18 45 |      |
| 3  | 12 56 | 13 32 | 14 8  | 14 45 | 15 23 | 16 2  | 16 41 | 17 22 | 18 4  |      |
| 4  | 12 27 | 13 1  | 13 36 | 14 12 | 14 48 | 15 26 | 16 4  | 16 43 | 17 24 |      |
| 5  | 11 57 | 12 31 | 13 4  | 13 38 | 14 13 | 14 49 | 15 26 | 16 4  | 16 43 |      |
| 6  | 11 28 | 12 0  | 12 32 | 13 5  | 13 38 | 14 13 | 14 48 | 15 24 | 16 2  |      |
| 7  | 10 58 | 11 29 | 12 59 | 12 31 | 13 3  | 13 36 | 14 10 | 14 45 | 15 21 |      |
| 8  | 10 28 | 10 58 | 11 27 | 11 57 | 12 28 | 12 59 | 13 32 | 14 5  | 14 40 |      |
| 9  | 9 58  | 10 26 | 10 54 | 11 23 | 11 52 | 12 22 | 12 53 | 13 25 | 13 58 |      |
| 10 | 9 28  | 9 55  | 10 21 | 10 48 | 11 16 | 11 45 | 12 14 | 12 44 | 13 16 |      |
| 11 | 8 58  | 9 23  | 9 48  | 10 14 | 10 40 | 11 8  | 11 35 | 12 4  | 12 34 |      |
| 12 | 8 27  | 8 51  | 9 15  | 9 39  | 10 4  | 10 30 | 10 56 | 11 23 | 11 51 |      |
| 13 | 7 56  | 8 19  | 8 41  | 9 4   | 9 27  | 9 52  | 10 16 | 10 42 | 11 8  |      |
| 14 | 7 25  | 7 46  | 8 7   | 8 29  | 8 50  | 9 13  | 9 36  | 10 0  | 10 25 |      |
| 15 | 6 53  | 7 13  | 7 33  | 7 53  | 8 13  | 8 34  | 8 56  | 9 18  | 9 41  |      |
| 16 | 6 21  | 6 40  | 6 58  | 7 17  | 7 35  | 7 55  | 8 15  | 8 35  | 8 57  |      |
| 17 | 5 49  | 6 6   | 6 23  | 6 40  | 6 57  | 7 15  | 7 31  | 7 42  | 8 12  |      |
| 18 | 5 17  | 5 32  | 5 47  | 6 2   | 6 18  | 6 34  | 6 51  | 7 8   | 7 26  |      |
| 19 | 4 44  | 4 58  | 5 11  | 5 25  | 5 39  | 5 54  | 6 9   | 6 23  | 6 40  |      |
| 20 | 4 10  | 4 23  | 4 35  | 4 47  | 4 59  | 5 12  | 5 25  | 5 39  | 5 53  |      |
| 21 | 3 37  | 3 47  | 3 58  | 4 8   | 4 19  | 4 30  | 4 41  | 4 43  | 5 6   |      |
| 22 | 3 2   | 3 11  | 3 20  | 3 29  | 3 38  | 3 47  | 3 57  | 4 6   | 4 17  |      |
| 23 | 2 27  | 2 35  | 2 41  | 2 48  | 2 56  | 3 3   | 3 11  | 3 19  | 3 28  |      |
| 24 | 1 51  | 1 57  | 2 2   | 2 8   | 2 13  | 2 19  | 2 15  | 2 31  | 2 37  |      |
| 25 | 1 15  | 1 19  | 1 23  | 1 26  | 1 30  | 1 34  | 1 38  | 1 41  | 1 46  |      |
| 26 | 0 38  | 0 41  | 0 42  | 0 44  | 0 46  | 0 48  | 0 49  | 0 51  | 0 54  |      |
| 27 | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |      |
| 28 |       |       |       |       |       |       |       |       |       |      |
| 29 |       |       |       |       |       |       |       |       |       |      |
| 30 |       |       |       |       |       |       |       |       |       |      |
| 31 |       |       |       |       |       |       |       |       |       |      |
| 32 |       |       |       |       |       |       |       |       |       |      |



# TABVLA POSITIONVM AD 63.

| Eleuatio | 35 |    |    | 36 |    |    | 37 |    |    | 38 |    |    | 39 |    |    | 40 |    |   | 41 |   |   | 42 |   |  |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|----|---|---|----|---|--|
|          | 5  | 5  | 1  | 5  | 1  | 5  | 1  | 5  | 1  | 5  | 1  | 5  | 1  | 5  | 1  | 5  | 1  | 5 | 1  | 5 | 1 | 5  | 1 |  |
| Decli    | 32 | 46 | 51 | 48 | 44 | 50 | 40 | 52 | 41 | 54 | 46 | 56 | 57 | 59 | 13 | 61 | 35 |   |    |   |   |    |   |  |
|          | 31 | 45 | 47 | 47 | 37 | 49 | 30 | 51 | 28 | 53 | 30 | 55 | 37 | 57 | 48 | 60 | 5  |   |    |   |   |    |   |  |
| natio    | 30 | 44 | 45 | 46 | 32 | 48 | 22 | 50 | 17 | 52 | 15 | 54 | 19 | 56 | 26 | 58 | 39 |   |    |   |   |    |   |  |
|          | 29 | 43 | 44 | 45 | 29 | 47 | 16 | 49 | 8  | 51 | 3  | 53 | 3  | 55 | 7  | 57 | 16 |   |    |   |   |    |   |  |
| BORE     | 28 | 42 | 45 | 44 | 28 | 46 | 12 | 48 | 1  | 49 | 53 | 51 | 50 | 53 | 50 | 55 | 56 |   |    |   |   |    |   |  |
|          | 27 | 41 | 48 | 43 | 28 | 45 | 10 | 46 | 56 | 48 | 45 | 50 | 39 | 52 | 36 | 54 | 38 |   |    |   |   |    |   |  |
| ALIS     | 26 | 40 | 52 | 42 | 29 | 44 | 9  | 45 | 52 | 47 | 39 | 49 | 30 | 51 | 24 | 53 | 23 |   |    |   |   |    |   |  |
|          | 25 | 39 | 57 | 41 | 32 | 43 | 9  | 44 | 49 | 46 | 34 | 48 | 22 | 50 | 14 | 52 | 10 |   |    |   |   |    |   |  |
| supra    | 24 | 39 | 4  | 40 | 36 | 42 | 11 | 43 | 49 | 45 | 31 | 47 | 16 | 49 | 5  | 50 | 58 |   |    |   |   |    |   |  |
|          | 23 | 38 | 12 | 39 | 42 | 41 | 14 | 42 | 50 | 44 | 29 | 46 | 12 | 47 | 58 | 49 | 48 |   |    |   |   |    |   |  |
| terram   | 22 | 37 | 21 | 38 | 49 | 40 | 19 | 41 | 52 | 43 | 29 | 45 | 9  | 46 | 53 | 48 | 40 |   |    |   |   |    |   |  |
|          | 21 | 36 | 30 | 37 | 56 | 39 | 24 | 40 | 55 | 42 | 30 | 44 | 7  | 45 | 49 | 47 | 32 |   |    |   |   |    |   |  |
|          | 20 | 35 | 40 | 37 | 4  | 38 | 30 | 39 | 59 | 41 | 31 | 43 | 7  | 44 | 46 | 46 | 28 |   |    |   |   |    |   |  |
|          | 19 | 34 | 51 | 36 | 13 | 37 | 37 | 39 | 4  | 40 | 34 | 42 | 8  | 43 | 44 | 45 | 24 |   |    |   |   |    |   |  |
| ET       | 18 | 34 | 3  | 35 | 23 | 36 | 45 | 38 | 10 | 39 | 38 | 41 | 9  | 42 | 43 | 44 | 21 |   |    |   |   |    |   |  |
|          | 17 | 33 | 16 | 34 | 34 | 35 | 54 | 37 | 17 | 38 | 43 | 40 | 12 | 41 | 44 | 43 | 19 |   |    |   |   |    |   |  |
| AVS      | 16 | 32 | 29 | 33 | 46 | 35 | 4  | 36 | 25 | 37 | 49 | 39 | 15 | 40 | 45 | 42 | 18 |   |    |   |   |    |   |  |
|          | 15 | 31 | 43 | 32 | 58 | 34 | 14 | 35 | 33 | 36 | 55 | 38 | 20 | 39 | 47 | 41 | 18 |   |    |   |   |    |   |  |
| TRA      | 14 | 30 | 57 | 32 | 10 | 33 | 25 | 34 | 42 | 36 | 2  | 37 | 25 | 38 | 50 | 40 | 18 |   |    |   |   |    |   |  |
|          | 13 | 30 | 12 | 31 | 23 | 32 | 36 | 33 | 52 | 35 | 9  | 36 | 30 | 37 | 54 | 39 | 20 |   |    |   |   |    |   |  |
| LIS      | 12 | 29 | 28 | 30 | 37 | 31 | 48 | 33 | 2  | 34 | 18 | 35 | 36 | 36 | 58 | 38 | 22 |   |    |   |   |    |   |  |
|          | 11 | 28 | 43 | 29 | 51 | 31 | 0  | 32 | 12 | 33 | 26 | 34 | 43 | 36 | 3  | 37 | 25 |   |    |   |   |    |   |  |
| sub      | 10 | 28 | 0  | 29 | 6  | 30 | 13 | 31 | 23 | 32 | 36 | 33 | 50 | 35 | 8  | 36 | 28 |   |    |   |   |    |   |  |
|          | 9  | 27 | 16 | 28 | 20 | 29 | 26 | 30 | 34 | 31 | 45 | 32 | 58 | 34 | 14 | 35 | 32 |   |    |   |   |    |   |  |
| terra.   | 8  | 26 | 33 | 27 | 36 | 28 | 40 | 29 | 46 | 30 | 55 | 32 | 6  | 33 | 20 | 34 | 36 |   |    |   |   |    |   |  |
|          | 7  | 25 | 50 | 26 | 51 | 27 | 54 | 28 | 58 | 30 | 5  | 31 | 15 | 32 | 27 | 33 | 41 |   |    |   |   |    |   |  |
|          | 6  | 25 | 7  | 26 | 7  | 27 | 8  | 28 | 11 | 29 | 16 | 30 | 24 | 31 | 34 | 32 | 46 |   |    |   |   |    |   |  |
|          | 5  | 24 | 25 | 25 | 23 | 26 | 22 | 27 | 23 | 28 | 27 | 29 | 33 | 30 | 41 | 31 | 51 |   |    |   |   |    |   |  |
|          | 4  | 23 | 42 | 24 | 39 | 25 | 36 | 26 | 36 | 27 | 38 | 28 | 42 | 29 | 48 | 30 | 57 |   |    |   |   |    |   |  |
|          | 3  | 23 | 0  | 23 | 55 | 24 | 51 | 25 | 49 | 26 | 49 | 27 | 51 | 28 | 56 | 30 | 2  |   |    |   |   |    |   |  |
|          | 2  | 22 | 18 | 23 | 11 | 24 | 6  | 25 | 2  | 26 | 0  | 27 | 1  | 28 | 3  | 29 | 8  |   |    |   |   |    |   |  |
|          | 1  | 21 | 36 | 22 | 28 | 23 | 20 | 24 | 15 | 25 | 12 | 26 | 10 | 27 | 11 | 28 | 14 |   |    |   |   |    |   |  |
|          | 0  | 20 | 54 | 21 | 44 | 22 | 35 | 23 | 28 | 24 | 23 | 25 | 20 | 26 | 19 | 27 | 20 |   |    |   |   |    |   |  |



## GRADVS LATITVDINIS.

|    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51    | poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 32 | 64 1  | 66 36 | 69 18 | 72 10 | 75 11 | 78 24 | 81 49 | 85 31 | 89 30 |      |
| 31 | 62 28 | 64 57 | 67 34 | 70 20 | 73 14 | 76 19 | 79 36 | 83 7  | 86 54 |      |
| 30 | 60 58 | 63 22 | 65 54 | 68 34 | 71 22 | 74 18 | 77 29 | 80 52 | 84 29 |      |
| 29 | 59 31 | 61 51 | 64 18 | 66 53 | 69 35 | 72 27 | 75 29 | 78 44 | 82 12 |      |
| 28 | 58 7  | 60 23 | 62 45 | 65 16 | 67 53 | 70 39 | 73 34 | 76 42 | 80 2  |      |
| 27 | 56 45 | 58 58 | 61 16 | 63 42 | 66 14 | 68 55 | 71 45 | 74 46 | 78 0  |      |
| 26 | 55 26 | 57 35 | 59 49 | 62 11 | 64 39 | 67 15 | 70 0  | 72 55 | 76 2  |      |
| 25 | 54 10 | 56 15 | 58 26 | 60 43 | 63 7  | 65 39 | 68 18 | 71 9  | 74 10 |      |
| 24 | 52 55 | 54 57 | 57 4  | 59 18 | 61 38 | 64 5  | 66 40 | 69 26 | 72 21 |      |
| 23 | 51 32 | 53 41 | 55 45 | 57 56 | 60 11 | 62 35 | 65 6  | 67 46 | 70 37 |      |
| 22 | 50 31 | 52 27 | 54 28 | 56 36 | 58 47 | 61 7  | 63 34 | 66 10 | 68 56 |      |
| 21 | 49 22 | 51 15 | 53 12 | 55 16 | 57 25 | 59 41 | 62 4  | 64 37 | 67 18 |      |
| 20 | 48 13 | 50 4  | 51 59 | 53 59 | 56 5  | 58 8  | 60 37 | 63 6  | 65 45 |      |
| 19 | 47 7  | 48 54 | 50 47 | 52 45 | 54 47 | 56 56 | 59 12 | 61 37 | 64 10 |      |
| 18 | 46 1  | 47 46 | 49 36 | 51 31 | 53 30 | 55 36 | 57 49 | 60 10 | 62 39 |      |
| 17 | 44 57 | 46 39 | 48 26 | 50 18 | 52 15 | 54 18 | 56 28 | 58 45 | 61 11 |      |
| 16 | 43 54 | 45 34 | 47 18 | 49 7  | 51 1  | 53 1  | 55 8  | 57 22 | 59 44 |      |
| 15 | 42 51 | 44 29 | 46 10 | 47 58 | 49 49 | 51 46 | 53 49 | 56 0  | 58 19 |      |
| 14 | 41 50 | 43 25 | 45 4  | 46 49 | 48 37 | 50 32 | 52 32 | 54 40 | 56 56 |      |
| 13 | 40 49 | 42 22 | 43 49 | 45 41 | 47 27 | 49 18 | 51 16 | 53 21 | 55 34 |      |
| 12 | 39 49 | 41 20 | 42 54 | 44 34 | 46 18 | 48 6  | 50 1  | 52 3  | 54 13 |      |
| 11 | 38 50 | 40 18 | 41 50 | 43 28 | 45 9  | 46 55 | 48 47 | 50 47 | 52 53 |      |
| 10 | 37 51 | 39 17 | 40 47 | 42 22 | 44 1  | 45 55 | 47 34 | 49 31 | 51 35 |      |
| 9  | 36 53 | 38 17 | 39 45 | 42 17 | 42 54 | 44 35 | 46 22 | 48 16 | 50 17 |      |
| 8  | 35 55 | 37 17 | 38 43 | 40 13 | 41 47 | 43 26 | 45 10 | 47 1  | 49 0  |      |
| 7  | 34 57 | 36 18 | 37 41 | 39 9  | 40 41 | 42 17 | 43 59 | 45 48 | 47 43 |      |
| 6  | 34 0  | 35 19 | 36 40 | 38 6  | 39 35 | 41 1  | 42 49 | 44 35 | 46 27 |      |
| 5  | 33 4  | 34 20 | 35 39 | 37 3  | 38 30 | 40 2  | 41 39 | 43 22 | 45 12 |      |
| 4  | 32 7  | 33 21 | 34 39 | 36 0  | 37 25 | 38 54 | 40 29 | 42 10 | 43 57 |      |
| 3  | 31 11 | 32 23 | 33 38 | 34 58 | 36 20 | 37 47 | 39 19 | 40 58 | 42 43 |      |
| 2  | 30 15 | 31 25 | 32 38 | 33 55 | 35 16 | 36 40 | 38 10 | 39 46 | 41 28 |      |
| 1  | 29 19 | 30 27 | 31 38 | 32 53 | 34 11 | 35 34 | 37 1  | 38 35 | 40 14 |      |
| 0  | 28 23 | 29 29 | 30 38 | 31 51 | 33 7  | 34 27 | 35 52 | 37 23 | 39 0  |      |



TABVL APOSITIONVM AD 63

[illegible]



## GRADVS LATITVDINIS.

|    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51    | Poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| ̄  | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄     | ̄    |
| 0  | 28 23 | 29 29 | 30 38 | 31 51 | 33 7  | 34 27 | 35 52 | 37 23 | 39 0  |      |
| 1  | 27 27 | 28 31 | 29 38 | 30 49 | 32 3  | 33 20 | 34 43 | 36 11 | 37 46 |      |
| 2  | 26 31 | 27 33 | 28 38 | 29 47 | 30 58 | 32 14 | 33 34 | 35 0  | 36 32 |      |
| 3  | 25 35 | 26 35 | 27 38 | 28 44 | 29 54 | 31 7  | 32 25 | 33 48 | 35 17 |      |
| 4  | 24 39 | 25 37 | 26 37 | 27 42 | 28 49 | 30 0  | 31 15 | 32 36 | 34 3  |      |
| 5  | 23 42 | 24 37 | 25 37 | 26 39 | 27 44 | 28 52 | 30 5  | 31 24 | 32 48 |      |
| 6  | 22 46 | 23 39 | 24 36 | 25 36 | 26 39 | 27 45 | 28 55 | 30 11 | 31 33 |      |
| 7  | 21 49 | 22 40 | 23 35 | 24 33 | 25 33 | 26 37 | 27 45 | 28 58 | 30 17 |      |
| 8  | 20 51 | 21 41 | 22 33 | 23 29 | 24 27 | 25 28 | 26 34 | 27 45 | 29 0  |      |
| 9  | 19 53 | 20 41 | 21 31 | 22 25 | 23 20 | 24 19 | 25 22 | 26 30 | 27 43 |      |
| 10 | 18 55 | 19 41 | 20 39 | 21 20 | 22 13 | 23 9  | 24 10 | 25 15 | 26 25 |      |
| 11 | 17 56 | 18 40 | 19 25 | 20 14 | 21 5  | 21 59 | 22 57 | 23 59 | 25 7  |      |
| 12 | 16 57 | 17 38 | 18 22 | 19 8  | 19 56 | 20 48 | 21 43 | 22 43 | 23 47 |      |
| 13 | 15 57 | 16 36 | 17 17 | 18 1  | 18 47 | 19 36 | 20 28 | 21 25 | 22 26 |      |
| 14 | 14 56 | 15 33 | 16 12 | 16 53 | 17 37 | 18 22 | 19 12 | 20 6  | 21 4  |      |
| 15 | 13 55 | 14 29 | 15 6  | 15 44 | 16 25 | 17 8  | 17 55 | 18 46 | 19 41 |      |
| 16 | 12 52 | 13 24 | 13 58 | 14 35 | 15 13 | 15 53 | 16 36 | 17 24 | 18 16 |      |
| 17 | 11 49 | 12 19 | 12 50 | 13 24 | 13 59 | 14 36 | 15 16 | 16 1  | 16 49 |      |
| 18 | 10 45 | 11 12 | 11 40 | 12 11 | 12 44 | 13 18 | 13 55 | 14 36 | 15 21 |      |
| 19 | 9 49  | 10 4  | 10 29 | 10 58 | 11 27 | 11 58 | 12 32 | 13 9  | 13 50 |      |
| 20 | 8 33  | 8 54  | 9 17  | 9 43  | 10 9  | 10 36 | 11 7  | 11 40 | 12 17 |      |
| 21 | 7 24  | 7 43  | 8 4   | 8 26  | 8 49  | 9 13  | 9 40  | 10 9  | 10 42 |      |
| 22 | 6 15  | 6 31  | 6 48  | 7 7   | 7 27  | 7 47  | 8 10  | 8 36  | 9 4   |      |
| 23 | 5 4   | 5 17  | 5 31  | 5 46  | 6 2   | 6 19  | 6 38  | 7 0   | 7 23  |      |
| 24 | 3 51  | 4 1   | 4 12  | 4 24  | 4 36  | 4 49  | 5 4   | 5 20  | 5 39  |      |
| 25 | 2 36  | 2 43  | 2 50  | 2 59  | 3 7   | 3 15  | 3 26  | 3 37  | 3 50  |      |
| 26 | 1 20  | 1 23  | 1 27  | 1 31  | 1 35  | 1 39  | 1 44  | 1 51  | 1 58  |      |
| 27 | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |      |
| 28 |       |       |       |       |       |       |       |       |       |      |
| 29 |       |       |       |       |       |       |       |       |       |      |
| 30 |       |       |       |       |       |       |       |       |       |      |
| 31 |       |       |       |       |       |       |       |       |       |      |
| 32 |       |       |       |       |       |       |       |       |       |      |



# TABVLA POSITIONVM AD 63

| Eleuatio | 52 |    |    | 53 |    |     | 54 |     |    | 55  |    |     | 56 |     |    | 57  |    |   | 58 |   |   | 59 |  |  |
|----------|----|----|----|----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|---|----|---|---|----|--|--|
|          | 5  | 5  | /  | 5  | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5 | /  | 5 | / |    |  |  |
| Decli    | 32 | 93 | 50 | 98 | 34 | 103 | 51 | 109 | 52 | 116 | 57 | 125 | 53 | 144 | 37 | 180 | 0  |   |    |   |   |    |  |  |
|          | 31 | 90 | 59 | 95 | 26 | 100 | 20 | 105 | 48 | 112 | 2  | 119 | 23 | 128 | 41 | 148 | 1  |   |    |   |   |    |  |  |
| natio    | 30 | 88 | 22 | 92 | 34 | 97  | 9  | 103 | 14 | 107 | 56 | 114 | 26 | 122 | 8  | 131 | 56 |   |    |   |   |    |  |  |
|          | 29 | 85 | 55 | 89 | 54 | 94  | 16 | 99  | 2  | 104 | 20 | 110 | 17 | 117 | 8  | 125 | 19 |   |    |   |   |    |  |  |
| BORE     | 28 | 83 | 36 | 87 | 26 | 91  | 34 | 96  | 6  | 101 | 5  | 106 | 39 | 112 | 56 | 120 | 15 |   |    |   |   |    |  |  |
|          | 27 | 81 | 25 | 85 | 6  | 89  | 4  | 93  | 23 | 98  | 8  | 103 | 22 | 109 | 15 | 116 | 1  |   |    |   |   |    |  |  |
| ALIS     | 26 | 79 | 21 | 82 | 53 | 86  | 42 | 90  | 51 | 95  | 22 | 100 | 22 | 105 | 56 | 112 | 17 |   |    |   |   |    |  |  |
|          | 25 | 77 | 22 | 80 | 47 | 84  | 28 | 88  | 27 | 92  | 48 | 97  | 45 | 102 | 53 | 148 | 55 |   |    |   |   |    |  |  |
| supra    | 24 | 75 | 27 | 78 | 46 | 82  | 20 | 86  | 11 | 90  | 22 | 94  | 58 | 100 | 3  | 105 | 50 |   |    |   |   |    |  |  |
|          | 23 | 73 | 37 | 76 | 50 | 80  | 17 | 84  | 1  | 88  | 4  | 92  | 30 | 97  | 24 | 102 | 58 |   |    |   |   |    |  |  |
| terram   | 22 | 71 | 51 | 74 | 58 | 78  | 19 | 81  | 56 | 85  | 52 | 90  | 9  | 94  | 54 | 100 | 16 |   |    |   |   |    |  |  |
|          | 21 | 70 | 9  | 73 | 10 | 76  | 26 | 79  | 57 | 83  | 45 | 87  | 55 | 92  | 31 | 97  | 43 |   |    |   |   |    |  |  |
|          | 20 | 68 | 29 | 71 | 26 | 74  | 36 | 78  | 1  | 81  | 43 | 85  | 46 | 90  | 14 | 95  | 18 |   |    |   |   |    |  |  |
|          | 19 | 66 | 52 | 69 | 44 | 72  | 49 | 76  | 9  | 79  | 45 | 83  | 42 | 88  | 3  | 92  | 59 |   |    |   |   |    |  |  |
| ET       | 18 | 65 | 17 | 68 | 6  | 71  | 6  | 74  | 21 | 77  | 52 | 81  | 42 | 85  | 57 | 90  | 45 |   |    |   |   |    |  |  |
|          | 17 | 63 | 45 | 66 | 29 | 69  | 25 | 72  | 35 | 76  | 1  | 79  | 46 | 83  | 55 | 88  | 36 |   |    |   |   |    |  |  |
| A VS     | 16 | 62 | 15 | 64 | 55 | 67  | 47 | 70  | 52 | 74  | 13 | 77  | 53 | 81  | 56 | 86  | 31 |   |    |   |   |    |  |  |
|          | 15 | 60 | 47 | 63 | 23 | 66  | 10 | 69  | 12 | 72  | 28 | 76  | 3  | 80  | 0  | 84  | 30 |   |    |   |   |    |  |  |
| TRA      | 14 | 59 | 20 | 61 | 52 | 64  | 36 | 67  | 34 | 70  | 46 | 74  | 16 | 78  | 8  | 82  | 32 |   |    |   |   |    |  |  |
|          | 13 | 57 | 54 | 60 | 23 | 63  | 4  | 65  | 57 | 69  | 5  | 72  | 31 | 76  | 18 | 80  | 37 |   |    |   |   |    |  |  |
| LIS      | 12 | 56 | 30 | 58 | 56 | 61  | 32 | 64  | 22 | 67  | 26 | 70  | 47 | 74  | 30 | 78  | 44 |   |    |   |   |    |  |  |
|          | 11 | 55 | 7  | 57 | 30 | 60  | 3  | 62  | 49 | 65  | 49 | 69  | 6  | 72  | 45 | 76  | 54 |   |    |   |   |    |  |  |
| lub      | 10 | 53 | 46 | 56 | 5  | 58  | 35 | 61  | 17 | 64  | 13 | 67  | 26 | 71  | 0  | 75  | 5  |   |    |   |   |    |  |  |
|          | 9  | 52 | 25 | 54 | 41 | 57  | 7  | 59  | 46 | 62  | 44 | 65  | 48 | 69  | 18 | 73  | 18 |   |    |   |   |    |  |  |
| ter      | 8  | 51 | 5  | 53 | 18 | 55  | 41 | 58  | 17 | 61  | 5  | 64  | 11 | 67  | 37 | 71  | 33 |   |    |   |   |    |  |  |
|          | 7  | 49 | 45 | 51 | 56 | 54  | 16 | 56  | 48 | 59  | 33 | 62  | 35 | 65  | 57 | 69  | 48 |   |    |   |   |    |  |  |
| ra.      | 6  | 48 | 27 | 50 | 34 | 52  | 51 | 55  | 20 | 58  | 2  | 61  | 0  | 64  | 18 | 68  | 5  |   |    |   |   |    |  |  |
|          | 5  | 47 | 9  | 49 | 13 | 51  | 27 | 53  | 53 | 56  | 31 | 58  | 25 | 62  | 40 | 66  | 23 |   |    |   |   |    |  |  |
|          | 4  | 45 | 51 | 47 | 52 | 50  | 3  | 52  | 26 | 55  | 1  | 57  | 52 | 61  | 2  | 64  | 42 |   |    |   |   |    |  |  |
|          | 3  | 44 | 34 | 46 | 32 | 48  | 40 | 50  | 59 | 53  | 31 | 56  | 19 | 59  | 26 | 63  | 1  |   |    |   |   |    |  |  |
|          | 2  | 43 | 17 | 45 | 12 | 47  | 13 | 49  | 34 | 52  | 2  | 54  | 46 | 57  | 49 | 61  | 21 |   |    |   |   |    |  |  |
|          | 1  | 42 | 0  | 43 | 53 | 45  | 55 | 48  | 8  | 50  | 33 | 53  | 13 | 56  | 13 | 59  | 41 |   |    |   |   |    |  |  |
|          | 0  | 40 | 43 | 42 | 33 | 44  | 32 | 46  | 42 | 49  | 4  | 51  | 41 | 54  | 37 | 58  | 1  |   |    |   |   |    |  |  |



GRADVS LATITVDINIS.

[illegible]

Poli



# TABVLA POSITIONVM AD 63.

| Eleuatio | 52 | 53    | 54    | 55    | 56    | 57    | 58    | 59    |       |
|----------|----|-------|-------|-------|-------|-------|-------|-------|-------|
|          | 0  | 40 43 | 42 33 | 44 32 | 46 42 | 49 4  | 51 41 | 54 37 | 58    |
| Decli    | 1  | 39 26 | 41 13 | 43 9  | 45 16 | 47 35 | 50 9  | 53 1  | 56 21 |
| natio    | 2  | 38 9  | 39 56 | 41 47 | 43 50 | 46 6  | 48 36 | 51 25 | 54 41 |
|          | 3  | 36 52 | 38 34 | 40 24 | 42 25 | 44 37 | 47 3  | 49 48 | 53 1  |
| AVS      | 4  | 35 35 | 37 14 | 39 1  | 40 58 | 42 7  | 45 30 | 48 12 | 51 20 |
|          | 5  | 34 17 | 35 53 | 37 37 | 39 31 | 41 37 | 43 57 | 46 34 | 49 39 |
| TRA      | 6  | 32 59 | 34 32 | 36 13 | 38 4  | 40 6  | 42 22 | 44 56 | 47 57 |
|          | 7  | 31 41 | 33 10 | 34 48 | 36 36 | 38 35 | 40 47 | 43 17 | 46 14 |
| LIS      | 8  | 30 21 | 31 48 | 33 23 | 35 7  | 37 3  | 39 11 | 41 37 | 44 29 |
|          | 9  | 29 1  | 30 25 | 31 57 | 33 38 | 35 29 | 37 34 | 39 56 | 42 44 |
| supra    | 10 | 27 40 | 29 1  | 30 29 | 32 7  | 33 55 | 35 56 | 38 14 | 40 57 |
|          | 11 | 26 19 | 27 36 | 29 1  | 30 35 | 32 19 | 34 16 | 36 29 | 39 8  |
| terram   | 12 | 24 56 | 26 10 | 27 32 | 29 2  | 30 42 | 32 35 | 34 44 | 37 18 |
|          | 13 | 23 32 | 24 43 | 26 0  | 27 27 | 29 3  | 30 51 | 32 56 | 35 25 |
|          | 14 | 22 16 | 23 14 | 24 28 | 25 50 | 27 22 | 29 6  | 31 6  | 33 30 |
|          | 15 | 20 39 | 21 43 | 22 54 | 24 12 | 35 40 | 27 19 | 29 14 | 31 32 |
| ET       | 16 | 19 11 | 20 11 | 21 17 | 22 32 | 23 55 | 25 29 | 27 18 | 29 31 |
|          | 17 | 17 41 | 18 37 | 19 39 | 20 51 | 22 7  | 23 36 | 25 19 | 27 26 |
| BORR     | 18 | 16 9  | 17 0  | 18 58 | 19 3  | 20 16 | 21 40 | 23 17 | 25 17 |
|          | 19 | 14 34 | 15 22 | 16 15 | 17 15 | 18 23 | 19 40 | 21 11 | 23 3  |
| ALIS     | 20 | 12 57 | 13 40 | 14 28 | 15 23 | 16 25 | 17 36 | 19 0  | 20 44 |
|          | 21 | 11 17 | 11 56 | 12 38 | 13 27 | 14 23 | 15 27 | 16 43 | 18 19 |
| sub      | 22 | 9 35  | 10 8  | 10 45 | 11 28 | 12 16 | 13 13 | 14 20 | 15 46 |
|          | 23 | 7 49  | 8 16  | 8 47  | 9 23  | 10 4  | 10 52 | 11 50 | 13 4  |
| ter      | 24 | 5 59  | 6 20  | 6 44  | 7 13  | 7 46  | 8 24  | 9 11  | 10 12 |
|          | 25 | 4 4   | 4 19  | 4 36  | 4 57  | 5 20  | 5 47  | 6 21  | 7 7   |
| ra.      | 26 | 2 5   | 2 13  | 3 22  | 2 33  | 2 46  | 3 0   | 3 18  | 3 45  |
|          | 27 | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |
|          | 28 |       |       |       |       |       |       |       |       |
|          | 29 |       |       |       |       |       |       |       |       |
|          | 30 |       |       |       |       |       |       |       |       |
|          | 31 |       |       |       |       |       |       |       |       |
|          | 32 |       |       |       |       |       |       |       |       |



## GRADVS LATITVDINIS.

|    | 60    | 61    | 62    | 63    |
|----|-------|-------|-------|-------|
| 5  | 5     | 5     | 5     | 5     |
| 0  | 61 57 | 66 50 | 73 24 | 90 0  |
| 1  | 60 13 | 65 2  | 71 31 | 88 2  |
| 2  | 58 29 | 63 13 | 69 38 | 86 4  |
| 3  | 56 44 | 61 24 | 67 45 | 84 6  |
| 4  | 55 0  | 59 45 | 65 51 | 82 7  |
| 5  | 53 14 | 57 45 | 63 56 | 80 7  |
| 6  | 51 29 | 55 54 | 62 0  | 78 6  |
| 7  | 49 40 | 54 2  | 60 3  | 76 3  |
| 8  | 47 52 | 52 9  | 58 4  | 73 59 |
| 9  | 46 2  | 50 14 | 56 4  | 71 53 |
| 10 | 44 10 | 48 17 | 54 2  | 69 45 |
| 11 | 42 16 | 46 18 | 51 57 | 67 34 |
| 12 | 40 21 | 44 17 | 49 50 | 65 20 |
| 13 | 38 23 | 42 13 | 47 40 | 63 3  |
| 14 | 36 22 | 40 6  | 45 26 | 60 42 |
| 15 | 34 18 | 37 56 | 43 8  | 58 16 |
| 16 | 32 10 | 35 41 | 40 46 | 55 45 |
| 17 | 29 58 | 33 22 | 38 18 | 53 8  |
| 18 | 27 42 | 30 57 | 35 44 | 50 23 |
| 19 | 25 20 | 28 26 | 33 2  | 47 29 |
| 20 | 22 52 | 25 47 | 30 12 | 44 25 |
| 21 | 20 17 | 23 0  | 27 12 | 41 7  |
| 22 | 17 32 | 20 2  | 23 57 | 37 32 |
| 23 | 14 37 | 16 51 | 20 26 | 33 35 |
| 24 | 11 30 | 13 24 | 16 32 | 29 6  |
| 25 | 8 5   | 9 34  | 12 7  | 23 46 |
| 26 | 4 18  | 5 12  | 6 52  | 16 49 |
| 27 | 0 0   | 0 0   | 0 0   | 0 0   |
| 28 |       |       |       |       |
| 29 |       |       |       |       |
| 30 |       |       |       |       |
| 31 |       |       |       |       |
| 32 |       |       |       |       |

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# TABVLA POSITIONVM AD 66

| Eleuatio | I  |      | 2    |      | 3    |      | 4    |      | 5    |   | 6 |   | 7 |   | 8 |   |
|----------|----|------|------|------|------|------|------|------|------|---|---|---|---|---|---|---|
|          | ̄  | ̄    | ̄    | ̄    | ̄    | ̄    | ̄    | ̄    | ̄    | ̄ | ̄ | ̄ | ̄ | ̄ | ̄ | ̄ |
| Decli    | 32 | 1 4  | 2 8  | 3 13 | 4 17 | 5 22 | 6 27 | 7 32 | 8 37 |   |   |   |   |   |   |   |
|          | 31 | 1 3  | 2 5  | 3 8  | 4 11 | 5 15 | 6 18 | 7 22 | 8 26 |   |   |   |   |   |   |   |
| natio    | 30 | 1 2  | 2 2  | 3 4  | 4 6  | 5 8  | 6 10 | 7 12 | 8 14 |   |   |   |   |   |   |   |
|          | 29 | 1 0  | 2 0  | 3 0  | 4 0  | 5 1  | 6 1  | 7 2  | 8 3  |   |   |   |   |   |   |   |
|          | 28 | 0 59 | 1 57 | 2 56 | 3 55 | 4 54 | 5 53 | 6 53 | 7 52 |   |   |   |   |   |   |   |
|          | 27 | 0 58 | 1 54 | 2 52 | 3 50 | 4 47 | 5 45 | 6 43 | 7 41 |   |   |   |   |   |   |   |
| BORE     | 26 | 0 56 | 1 52 | 2 48 | 3 44 | 4 41 | 5 37 | 6 34 | 7 31 |   |   |   |   |   |   |   |
|          | 25 | 0 55 | 1 49 | 2 44 | 3 39 | 4 34 | 5 30 | 6 25 | 7 20 |   |   |   |   |   |   |   |
| ALIS     | 24 | 0 54 | 1 46 | 2 40 | 3 34 | 4 28 | 5 22 | 6 16 | 7 10 |   |   |   |   |   |   |   |
|          | 23 | 0 52 | 1 44 | 2 37 | 3 29 | 4 22 | 5 14 | 6 7  | 7 0  |   |   |   |   |   |   |   |
| supra    | 22 | 0 51 | 1 42 | 2 33 | 3 24 | 4 16 | 5 7  | 5 59 | 6 50 |   |   |   |   |   |   |   |
|          | 21 | 0 50 | 1 39 | 2 29 | 3 19 | 4 9  | 5 0  | 5 50 | 6 41 |   |   |   |   |   |   |   |
| terram   | 20 | 0 49 | 1 37 | 2 26 | 3 14 | 4 3  | 4 53 | 5 42 | 6 31 |   |   |   |   |   |   |   |
|          | 19 | 0 48 | 1 34 | 2 22 | 3 10 | 3 58 | 4 45 | 5 33 | 6 21 |   |   |   |   |   |   |   |
| ET       | 18 | 0 46 | 1 32 | 2 19 | 3 5  | 3 52 | 4 38 | 5 25 | 6 12 |   |   |   |   |   |   |   |
|          | 17 | 0 45 | 1 30 | 2 15 | 3 1  | 3 46 | 4 31 | 5 17 | 6 3  |   |   |   |   |   |   |   |
| AVS      | 16 | 0 44 | 1 27 | 2 12 | 2 56 | 3 40 | 4 25 | 5 9  | 5 54 |   |   |   |   |   |   |   |
|          | 15 | 0 43 | 1 25 | 2 8  | 2 51 | 3 35 | 4 18 | 5 1  | 5 45 |   |   |   |   |   |   |   |
| TRA      | 14 | 0 42 | 1 23 | 2 5  | 2 47 | 3 29 | 4 11 | 4 53 | 5 36 |   |   |   |   |   |   |   |
|          | 13 | 0 41 | 1 21 | 2 2  | 2 43 | 3 23 | 4 4  | 4 45 | 5 27 |   |   |   |   |   |   |   |
| LIS      | 12 | 0 40 | 1 18 | 1 58 | 2 38 | 3 18 | 3 58 | 4 38 | 5 18 |   |   |   |   |   |   |   |
|          | 11 | 0 39 | 1 16 | 1 55 | 2 34 | 3 12 | 3 51 | 4 30 | 5 9  |   |   |   |   |   |   |   |
| sub      | 10 | 0 38 | 1 14 | 1 52 | 2 29 | 3 7  | 3 45 | 4 22 | 5 0  |   |   |   |   |   |   |   |
|          | 9  | 0 36 | 1 12 | 1 49 | 2 25 | 3 2  | 3 38 | 4 15 | 4 51 |   |   |   |   |   |   |   |
| ter      | 8  | 0 35 | 1 10 | 1 45 | 2 21 | 2 56 | 3 32 | 4 7  | 4 43 |   |   |   |   |   |   |   |
|          | 7  | 0 34 | 1 8  | 1 42 | 2 17 | 2 51 | 3 25 | 4 0  | 4 34 |   |   |   |   |   |   |   |
| ra.      | 6  | 0 33 | 1 6  | 1 39 | 2 12 | 2 46 | 3 19 | 3 52 | 4 26 |   |   |   |   |   |   |   |
|          | 5  | 0 32 | 1 3  | 1 36 | 2 8  | 2 40 | 3 13 | 3 45 | 4 17 |   |   |   |   |   |   |   |
|          | 4  | 0 31 | 1 1  | 1 33 | 2 4  | 2 35 | 3 6  | 3 38 | 4 9  |   |   |   |   |   |   |   |
|          | 3  | 0 30 | 0 59 | 1 29 | 2 0  | 2 30 | 3 0  | 3 30 | 4 0  |   |   |   |   |   |   |   |
|          | 2  | 0 29 | 0 57 | 1 26 | 1 55 | 2 24 | 2 54 | 3 23 | 3 52 |   |   |   |   |   |   |   |
|          | 1  | 0 28 | 0 55 | 1 23 | 1 51 | 2 19 | 2 47 | 3 15 | 3 43 |   |   |   |   |   |   |   |
|          | 0  | 0 27 | 0 53 | 1 20 | 1 47 | 2 14 | 2 41 | 3 8  | 3 35 |   |   |   |   |   |   |   |



## GRADVS LATITVDINIS.

|    | 9    | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | poli |
|----|------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 32 | 9 44 | 10 50 | 11 57 | 13 4  | 14 12 | 15 20 | 16 29 | 17 39 | 18 50 |      |
| 31 | 9 31 | 10 35 | 11 41 | 12 46 | 13 53 | 14 59 | 16 7  | 17 15 | 18 24 |      |
| 30 | 9 18 | 10 21 | 11 25 | 12 29 | 13 34 | 14 39 | 15 45 | 16 52 | 17 59 |      |
| 29 | 9 5  | 10 7  | 11 9  | 12 12 | 13 15 | 14 19 | 15 23 | 16 29 | 17 34 |      |
| 28 | 8 53 | 9 53  | 10 54 | 11 55 | 12 57 | 13 59 | 15 2  | 16 6  | 17 10 |      |
| 27 | 8 41 | 9 39  | 10 39 | 11 39 | 12 39 | 13 40 | 14 42 | 15 44 | 16 47 |      |
| 26 | 8 29 | 9 26  | 10 24 | 11 23 | 12 22 | 13 21 | 14 22 | 15 22 | 16 24 |      |
| 25 | 8 17 | 9 13  | 10 10 | 11 7  | 12 5  | 13 3  | 14 2  | 15 1  | 16 1  |      |
| 24 | 8 6  | 9 0   | 9 56  | 10 52 | 11 48 | 12 44 | 13 42 | 14 40 | 15 38 |      |
| 23 | 7 54 | 8 48  | 9 42  | 10 37 | 11 31 | 12 26 | 13 23 | 14 19 | 15 16 |      |
| 22 | 7 43 | 8 35  | 9 28  | 10 22 | 11 15 | 12 9  | 13 4  | 13 59 | 14 55 |      |
| 21 | 7 32 | 8 23  | 9 15  | 10 7  | 10 59 | 11 52 | 12 45 | 13 39 | 14 33 |      |
| 20 | 7 21 | 8 11  | 9 1   | 9 52  | 10 43 | 11 34 | 12 27 | 13 19 | 14 12 |      |
| 19 | 7 11 | 7 59  | 8 48  | 9 38  | 10 28 | 11 17 | 12 9  | 13 0  | 13 52 |      |
| 18 | 7 0  | 7 47  | 8 35  | 9 24  | 10 12 | 11 1  | 11 51 | 12 41 | 13 31 |      |
| 17 | 6 50 | 7 35  | 8 22  | 9 10  | 9 57  | 10 44 | 11 33 | 12 22 | 13 11 |      |
| 16 | 6 39 | 7 24  | 8 10  | 8 56  | 9 42  | 10 28 | 11 15 | 12 3  | 12 51 |      |
| 15 | 6 29 | 7 12  | 7 57  | 8 42  | 9 27  | 10 12 | 10 58 | 11 44 | 12 31 |      |
| 14 | 6 19 | 7 1   | 7 45  | 8 28  | 9 12  | 9 56  | 10 41 | 11 26 | 12 11 |      |
| 13 | 6 9  | 6 50  | 7 32  | 8 15  | 8 57  | 9 40  | 10 24 | 11 8  | 11 52 |      |
| 12 | 5 59 | 6 39  | 7 20  | 8 1   | 8 43  | 9 24  | 10 7  | 10 50 | 11 33 |      |
| 11 | 5 49 | 6 28  | 7 8   | 7 48  | 8 28  | 9 9   | 9 50  | 10 32 | 11 13 |      |
| 10 | 5 39 | 6 17  | 6 56  | 7 35  | 8 14  | 8 53  | 9 33  | 10 14 | 10 54 |      |
| 9  | 5 29 | 6 6   | 6 44  | 7 22  | 8 0   | 8 38  | 9 17  | 9 56  | 10 36 |      |
| 8  | 5 19 | 5 55  | 6 32  | 7 9   | 7 46  | 8 22  | 9 0   | 9 39  | 10 17 |      |
| 7  | 5 10 | 5 44  | 6 20  | 6 56  | 7 31  | 8 7   | 8 44  | 9 21  | 9 58  |      |
| 6  | 5 0  | 5 34  | 6 8   | 6 43  | 7 17  | 7 52  | 8 28  | 9 4   | 9 39  |      |
| 5  | 4 51 | 5 23  | 5 56  | 6 30  | 7 3   | 7 37  | 8 12  | 8 46  | 9 21  |      |
| 4  | 4 41 | 5 12  | 5 45  | 6 17  | 6 50  | 7 22  | 7 55  | 8 29  | 9 3   |      |
| 3  | 4 32 | 5 2   | 5 33  | 6 4   | 6 36  | 7 7   | 7 39  | 8 12  | 8 44  |      |
| 2  | 4 22 | 4 51  | 5 21  | 5 51  | 6 21  | 6 52  | 7 23  | 7 54  | 8 26  |      |
| 1  | 4 12 | 4 41  | 5 10  | 5 39  | 6 8   | 6 37  | 7 7   | 7 37  | 8 7   |      |
| 0  | 4 3  | 4 30  | 4 58  | 5 26  | 5 54  | 6 22  | 6 51  | 7 20  | 7 49  |      |



# TABVLA POSITIONVM AD 66

| Eleuatio | I        | 2            | 3            | 4            | 5            | 6            | 7            | 8            |              |
|----------|----------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|          | g        | g            | g            | g            | g            | g            | g            | g            |              |
| Decli    | 0<br>1   | 0 27<br>0 26 | 0 53<br>0 51 | 1 20<br>1 17 | 1 47<br>1 43 | 2 14<br>2 9  | 2 41<br>2 35 | 3 8<br>3 1   | 3 35<br>3 27 |
| natio    | 2<br>3   | 0 25<br>0 24 | 0 49<br>0 47 | 1 14<br>1 11 | 1 39<br>1 34 | 2 4<br>1 58  | 2 28<br>2 22 | 2 53<br>2 46 | 3 18<br>3 10 |
| AVS      | 4<br>5   | 0 23<br>0 22 | 0 45<br>0 43 | 1 7<br>1 4   | 1 30<br>1 26 | 1 53<br>1 48 | 2 16<br>2 9  | 2 38<br>2 31 | 3 1<br>2 53  |
| TRA      | 6<br>7   | 0 21<br>0 20 | 0 40<br>0 38 | 1 1<br>0 58  | 1 22<br>1 17 | 1 42<br>1 37 | 2 3<br>1 57  | 2 24<br>2 16 | 2 44<br>2 36 |
| LIS      | 8<br>9   | 0 19<br>0 18 | 0 36<br>0 34 | 0 55<br>0 51 | 1 13<br>1 9  | 1 32<br>1 26 | 1 50<br>1 44 | 2 9<br>2 1   | 2 27<br>2 19 |
| supra    | 10<br>11 | 0 16<br>0 15 | 0 32<br>0 30 | 0 48<br>0 45 | 1 5<br>1 0   | 1 21<br>1 16 | 1 37<br>1 31 | 1 54<br>1 46 | 2 10<br>2 1  |
| terram   | 12<br>13 | 0 14<br>0 13 | 0 28<br>0 25 | 0 42<br>0 38 | 0 56<br>0 51 | 1 20<br>1 5  | 1 24<br>1 18 | 1 38<br>1 31 | 1 52<br>1 43 |
|          | 14<br>15 | 0 12<br>0 11 | 0 23<br>0 21 | 0 35<br>0 32 | 0 47<br>0 43 | 0 59<br>0 53 | 1 11<br>1 4  | 1 23<br>1 15 | 1 34<br>1 25 |
| ET       | 16<br>17 | 0 10<br>0 9  | 0 19<br>0 16 | 0 28<br>0 25 | 0 38<br>0 33 | 0 48<br>0 42 | 0 57<br>0 51 | 1 7<br>0 59  | 1 16<br>1 7  |
| BORE     | 18<br>19 | 0 8<br>0 6   | 0 14<br>0 12 | 0 21<br>0 18 | 0 29<br>0 24 | 0 36<br>0 30 | 0 44<br>0 37 | 0 51<br>0 43 | 0 58<br>0 49 |
| ALIS     | 20<br>21 | 0 5<br>0 4   | 0 9<br>0 7   | 0 14<br>0 11 | 0 20<br>0 15 | 0 25<br>0 19 | 0 29<br>0 22 | 0 34<br>0 26 | 0 39<br>0 29 |
| sub      | 22<br>23 | 0 3<br>0 2   | 0 4<br>0 2   | 0 7<br>0 3   | 0 10<br>0 5  | 0 12<br>0 6  | 0 15<br>0 8  | 0 17<br>0 9  | 0 20<br>0 10 |
| ter      | 24<br>25 | 0 0<br>0 0   | 0 0<br>0 0   | 0 0<br>0 0   | 0 0<br>0 0   | 0 0<br>0 0   | 0 0<br>0 0   | 0 0<br>0 0   | 0 0<br>0 0   |
| ra.      | 26<br>27 |              |              |              |              |              |              |              |              |
|          | 28<br>29 |              |              |              |              |              |              |              |              |
|          | 30<br>31 |              |              |              |              |              |              |              |              |
|          | 32       |              |              |              |              |              |              |              |              |



## GRADVS LATITVDINIS.

|    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | pol |
|----|------|------|------|------|------|------|------|------|------|-----|
| ̄  | ̄    | ̄    | ̄    | ̄    | ̄    | ̄    | ̄    | ̄    | ̄    | ̄   |
| 0  | 4 3  | 4 30 | 4 58 | 5 26 | 5 54 | 6 22 | 6 51 | 7 20 | 7 49 |     |
| 1  | 3 54 | 4 19 | 4 46 | 5 13 | 5 40 | 6 7  | 6 35 | 7 3  | 7 31 |     |
| 2  | 3 44 | 4 11 | 4 35 | 5 1  | 5 26 | 5 52 | 6 19 | 6 46 | 7 12 |     |
| 3  | 3 34 | 3 58 | 4 23 | 4 48 | 5 12 | 5 37 | 6 3  | 6 28 | 6 54 |     |
| 4  | 3 25 | 3 48 | 4 11 | 4 35 | 4 58 | 5 22 | 5 47 | 6 11 | 6 35 |     |
| 5  | 3 15 | 3 37 | 4 0  | 4 22 | 4 45 | 5 7  | 5 30 | 5 54 | 6 17 |     |
| 6  | 3 6  | 3 26 | 3 48 | 4 9  | 4 31 | 4 52 | 5 14 | 5 36 | 5 59 |     |
| 7  | 2 56 | 3 16 | 3 36 | 3 56 | 4 17 | 4 37 | 4 58 | 5 19 | 5 40 |     |
| 8  | 2 47 | 3 5  | 3 24 | 3 43 | 4 2  | 4 22 | 4 42 | 5 1  | 5 21 |     |
| 9  | 2 37 | 2 54 | 3 12 | 3 30 | 3 48 | 4 6  | 4 25 | 4 44 | 5 2  |     |
| 10 | 2 27 | 2 43 | 3 0  | 3 17 | 3 34 | 3 51 | 4 9  | 4 26 | 4 44 |     |
| 11 | 2 17 | 2 32 | 2 48 | 3 4  | 3 20 | 3 35 | 3 52 | 4 8  | 4 25 |     |
| 12 | 2 7  | 2 21 | 2 36 | 2 51 | 3 5  | 3 20 | 3 35 | 3 50 | 4 5  |     |
| 13 | 1 57 | 2 10 | 2 24 | 2 37 | 2 51 | 3 4  | 3 18 | 3 32 | 3 46 |     |
| 14 | 1 47 | 1 59 | 2 11 | 2 24 | 2 36 | 2 48 | 3 1  | 3 14 | 3 27 |     |
| 15 | 1 37 | 1 48 | 1 59 | 2 10 | 2 21 | 2 32 | 2 44 | 2 56 | 3 7  |     |
| 16 | 1 27 | 1 36 | 1 46 | 1 56 | 2 6  | 2 16 | 2 27 | 2 37 | 2 47 |     |
| 17 | 1 16 | 1 25 | 1 34 | 1 42 | 1 51 | 2 0  | 2 9  | 2 18 | 2 27 |     |
| 18 | 1 6  | 1 13 | 1 21 | 1 28 | 1 36 | 1 43 | 1 51 | 1 59 | 2 7  |     |
| 19 | 0 55 | 1 1  | 1 8  | 1 14 | 1 20 | 1 27 | 1 33 | 1 40 | 1 46 |     |
| 20 | 0 45 | 0 49 | 0 55 | 1 0  | 1 5  | 1 10 | 1 15 | 1 21 | 1 26 |     |
| 21 | 0 34 | 0 37 | 0 41 | 0 45 | 0 49 | 0 52 | 0 57 | 1 1  | 1 5  |     |
| 22 | 0 23 | 0 25 | 0 28 | 0 30 | 0 33 | 0 35 | 0 38 | 0 41 | 0 43 |     |
| 23 | 0 12 | 0 13 | 0 14 | 0 15 | 0 17 | 0 18 | 0 19 | 0 21 | 0 22 |     |
| 24 | 0 0  | 0 0  | 0 0  | 0 0  | 0 0  | 0 0  | 0 0  | 0 0  | 0 0  |     |
| 25 |      |      |      |      |      |      |      |      |      |     |
| 26 |      |      |      |      |      |      |      |      |      |     |
| 27 |      |      |      |      |      |      |      |      |      |     |
| 28 |      |      |      |      |      |      |      |      |      |     |
| 29 |      |      |      |      |      |      |      |      |      |     |
| 30 |      |      |      |      |      |      |      |      |      |     |
| 31 |      |      |      |      |      |      |      |      |      |     |
| 32 |      |      |      |      |      |      |      |      |      |     |



# TABVLA POSITIONVM AD 66.

| Eleuatio | 18 |    |    | 19 |    |  | 20 |    |  | 21 |    |  | 22 |    |  | 23 |    |  | 24 |    |  | 25 |    |  |
|----------|----|----|----|----|----|--|----|----|--|----|----|--|----|----|--|----|----|--|----|----|--|----|----|--|
|          | g  | g  | /  | g  | /  |  | g  | /  |  | g  | /  |  | g  | /  |  | g  | /  |  | g  | /  |  | g  | /  |  |
| Decli    | 32 | 20 | 2  | 21 | 14 |  | 22 | 29 |  | 23 | 44 |  | 24 | 59 |  | 26 | 17 |  | 27 | 35 |  | 28 | 55 |  |
|          | 31 | 19 | 35 | 20 | 45 |  | 21 | 58 |  | 23 | 11 |  | 24 | 25 |  | 25 | 41 |  | 26 | 57 |  | 28 | 15 |  |
| natio    | 30 | 19 | 8  | 20 | 17 |  | 21 | 28 |  | 22 | 39 |  | 23 | 51 |  | 25 | 5  |  | 26 | 20 |  | 27 | 36 |  |
|          | 29 | 18 | 42 | 19 | 49 |  | 20 | 58 |  | 22 | 8  |  | 23 | 18 |  | 24 | 31 |  | 25 | 43 |  | 26 | 58 |  |
| BORE     | 28 | 18 | 16 | 19 | 22 |  | 20 | 29 |  | 21 | 38 |  | 22 | 46 |  | 23 | 57 |  | 25 | 8  |  | 26 | 20 |  |
|          | 27 | 17 | 51 | 18 | 55 |  | 20 | 1  |  | 21 | 8  |  | 22 | 15 |  | 23 | 23 |  | 24 | 33 |  | 25 | 44 |  |
| ALIS     | 26 | 17 | 26 | 18 | 29 |  | 19 | 34 |  | 20 | 38 |  | 21 | 44 |  | 22 | 51 |  | 23 | 59 |  | 25 | 8  |  |
|          | 25 | 17 | 2  | 18 | 3  |  | 19 | 6  |  | 20 | 10 |  | 21 | 14 |  | 22 | 19 |  | 23 | 25 |  | 24 | 33 |  |
| super    | 24 | 16 | 38 | 17 | 38 |  | 18 | 39 |  | 19 | 41 |  | 20 | 44 |  | 21 | 48 |  | 22 | 52 |  | 23 | 58 |  |
|          | 23 | 16 | 15 | 17 | 13 |  | 18 | 13 |  | 19 | 13 |  | 20 | 15 |  | 21 | 17 |  | 22 | 20 |  | 23 | 24 |  |
| terram   | 22 | 15 | 52 | 16 | 49 |  | 17 | 47 |  | 18 | 46 |  | 19 | 46 |  | 20 | 47 |  | 21 | 48 |  | 22 | 51 |  |
|          | 21 | 15 | 29 | 16 | 25 |  | 17 | 22 |  | 18 | 19 |  | 19 | 17 |  | 20 | 17 |  | 21 | 16 |  | 22 | 18 |  |
|          | 20 | 15 | 6  | 16 | 1  |  | 16 | 57 |  | 17 | 53 |  | 18 | 49 |  | 19 | 47 |  | 20 | 45 |  | 21 | 45 |  |
|          | 19 | 14 | 44 | 15 | 38 |  | 16 | 32 |  | 17 | 27 |  | 18 | 22 |  | 19 | 18 |  | 20 | 15 |  | 21 | 13 |  |
| ET       | 18 | 14 | 23 | 15 | 14 |  | 16 | 7  |  | 17 | 1  |  | 17 | 55 |  | 18 | 50 |  | 19 | 45 |  | 20 | 42 |  |
|          | 17 | 14 | 1  | 14 | 51 |  | 15 | 43 |  | 16 | 35 |  | 17 | 28 |  | 18 | 21 |  | 19 | 15 |  | 20 | 11 |  |
| AVS      | 16 | 13 | 40 | 14 | 29 |  | 15 | 19 |  | 16 | 10 |  | 17 | 1  |  | 17 | 53 |  | 18 | 46 |  | 19 | 40 |  |
|          | 15 | 13 | 19 | 14 | 7  |  | 14 | 56 |  | 15 | 45 |  | 16 | 35 |  | 17 | 26 |  | 18 | 17 |  | 19 | 10 |  |
| TRA      | 14 | 12 | 58 | 13 | 44 |  | 14 | 32 |  | 15 | 21 |  | 16 | 9  |  | 16 | 59 |  | 17 | 48 |  | 18 | 40 |  |
|          | 13 | 12 | 37 | 13 | 23 |  | 14 | 9  |  | 14 | 56 |  | 15 | 43 |  | 16 | 32 |  | 17 | 20 |  | 18 | 10 |  |
| LIS      | 12 | 12 | 17 | 13 | 1  |  | 13 | 46 |  | 14 | 32 |  | 15 | 18 |  | 16 | 5  |  | 16 | 52 |  | 17 | 40 |  |
|          | 11 | 11 | 56 | 12 | 39 |  | 13 | 23 |  | 14 | 8  |  | 14 | 52 |  | 15 | 38 |  | 16 | 24 |  | 17 | 11 |  |
| sub      | 10 | 11 | 36 | 12 | 18 |  | 13 | 1  |  | 13 | 44 |  | 14 | 27 |  | 15 | 12 |  | 15 | 56 |  | 16 | 42 |  |
|          | 9  | 11 | 16 | 11 | 57 |  | 12 | 38 |  | 13 | 20 |  | 14 | 2  |  | 14 | 45 |  | 15 | 29 |  | 16 | 13 |  |
| ter      | 8  | 10 | 56 | 11 | 35 |  | 12 | 16 |  | 12 | 57 |  | 13 | 37 |  | 14 | 19 |  | 15 | 1  |  | 15 | 44 |  |
|          | 7  | 10 | 26 | 11 | 14 |  | 11 | 54 |  | 12 | 33 |  | 13 | 13 |  | 13 | 53 |  | 14 | 34 |  | 15 | 16 |  |
| ra.      | 6  | 10 | 16 | 10 | 53 |  | 11 | 32 |  | 12 | 10 |  | 12 | 48 |  | 13 | 27 |  | 14 | 7  |  | 14 | 48 |  |
|          | 5  | 9  | 55 | 10 | 23 |  | 11 | 9  |  | 11 | 46 |  | 12 | 24 |  | 13 | 2  |  | 13 | 40 |  | 14 | 19 |  |
|          | 4  | 9  | 37 | 10 | 12 |  | 10 | 47 |  | 11 | 23 |  | 11 | 59 |  | 12 | 36 |  | 13 | 13 |  | 13 | 51 |  |
|          | 3  | 9  | 18 | 9  | 51 |  | 10 | 26 |  | 11 | 0  |  | 11 | 35 |  | 12 | 11 |  | 12 | 46 |  | 13 | 23 |  |
|          | 2  | 8  | 58 | 9  | 30 |  | 10 | 4  |  | 10 | 37 |  | 11 | 11 |  | 11 | 45 |  | 12 | 19 |  | 12 | 55 |  |
|          | 1  | 8  | 38 | 9  | 10 |  | 9  | 42 |  | 10 | 14 |  | 10 | 46 |  | 11 | 19 |  | 11 | 53 |  | 12 | 27 |  |
|          | 0  | 8  | 19 | 8  | 49 |  | 9  | 20 |  | 9  | 51 |  | 10 | 22 |  | 10 | 54 |  | 11 | 26 |  | 11 | 59 |  |



## GRADVS LATITVDINIS.

|    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 32 | 30 18 | 31 41 | 33 6  | 34 33 | 36 2  | 37 34 | 39 9  | 40 45 | 42 25 |      |
| 31 | 29 35 | 30 57 | 32 20 | 33 44 | 35 11 | 36 41 | 38 13 | 39 47 | 41 24 |      |
| 30 | 28 54 | 30 13 | 31 35 | 32 57 | 34 21 | 35 49 | 37 19 | 38 50 | 40 24 |      |
| 29 | 28 14 | 29 31 | 30 50 | 32 11 | 33 33 | 34 58 | 36 26 | 37 55 | 39 26 |      |
| 28 | 27 35 | 28 50 | 30 7  | 31 25 | 32 46 | 34 9  | 35 34 | 37 1  | 38 30 |      |
| 27 | 26 56 | 28 10 | 29 25 | 30 41 | 31 59 | 33 21 | 34 44 | 36 8  | 37 35 |      |
| 26 | 26 19 | 27 30 | 28 44 | 29 58 | 31 14 | 32 33 | 33 55 | 35 17 | 36 31 |      |
| 25 | 25 42 | 26 42 | 28 3  | 29 16 | 30 30 | 31 47 | 33 6  | 34 27 | 37 49 |      |
| 24 | 25 6  | 26 14 | 27 24 | 28 34 | 29 47 | 31 2  | 32 19 | 33 37 | 34 58 |      |
| 23 | 24 30 | 25 36 | 26 44 | 27 54 | 29 4  | 30 18 | 31 33 | 32 40 | 34 7  |      |
| 22 | 23 55 | 25 0  | 26 6  | 27 13 | 28 22 | 29 34 | 30 47 | 32 2  | 33 18 |      |
| 21 | 23 20 | 24 24 | 25 28 | 26 34 | 27 41 | 28 51 | 30 3  | 31 15 | 32 29 |      |
| 20 | 22 47 | 23 48 | 24 51 | 25 55 | 27 1  | 28 9  | 29 19 | 30 29 | 31 42 |      |
| 19 | 22 13 | 23 13 | 24 15 | 25 17 | 26 21 | 27 27 | 28 35 | 29 44 | 30 55 |      |
| 18 | 21 40 | 22 39 | 23 39 | 24 40 | 25 42 | 26 47 | 27 53 | 29 0  | 30 9  |      |
| 17 | 21 8  | 22 5  | 23 3  | 24 2  | 25 3  | 26 6  | 27 11 | 28 16 | 29 23 |      |
| 16 | 20 36 | 21 31 | 22 28 | 23 25 | 24 25 | 25 26 | 26 29 | 27 33 | 28 38 |      |
| 15 | 20 4  | 20 58 | 21 53 | 22 49 | 23 47 | 24 47 | 25 48 | 26 50 | 27 54 |      |
| 14 | 19 32 | 20 25 | 21 19 | 22 13 | 23 10 | 24 8  | 25 8  | 26 8  | 27 10 |      |
| 13 | 19 1  | 19 52 | 20 45 | 21 38 | 22 33 | 23 29 | 24 28 | 25 26 | 26 27 |      |
| 12 | 18 30 | 19 20 | 20 11 | 21 3  | 21 56 | 22 51 | 23 48 | 24 45 | 25 44 |      |
| 11 | 17 59 | 18 48 | 19 38 | 20 28 | 21 20 | 22 13 | 23 9  | 24 4  | 25 1  |      |
| 10 | 17 29 | 18 16 | 19 5  | 19 54 | 20 44 | 21 36 | 22 30 | 23 24 | 24 19 |      |
| 9  | 16 59 | 17 45 | 18 32 | 19 19 | 20 8  | 20 59 | 21 51 | 22 43 | 23 37 |      |
| 8  | 16 29 | 17 13 | 17 59 | 18 45 | 19 32 | 20 22 | 21 12 | 22 3  | 22 55 |      |
| 7  | 15 59 | 16 42 | 17 27 | 18 11 | 18 57 | 19 45 | 20 34 | 21 23 | 22 14 |      |
| 6  | 15 29 | 16 11 | 16 54 | 17 37 | 18 22 | 19 8  | 19 56 | 20 44 | 21 33 |      |
| 5  | 15 0  | 15 40 | 16 22 | 17 4  | 17 47 | 18 32 | 19 18 | 20 4  | 20 52 |      |
| 4  | 14 30 | 15 10 | 15 50 | 16 30 | 17 12 | 17 55 | 18 40 | 19 25 | 20 11 |      |
| 3  | 14 1  | 14 39 | 15 18 | 15 57 | 16 37 | 17 19 | 18 3  | 18 46 | 19 31 |      |
| 2  | 13 32 | 14 8  | 14 46 | 15 24 | 16 2  | 16 43 | 17 25 | 18 7  | 18 50 |      |
| 1  | 13 2  | 13 38 | 14 14 | 14 50 | 15 28 | 16 7  | 16 47 | 17 28 | 18 9  |      |
| 0  | 12 33 | 13 7  | 13 42 | 14 17 | 14 53 | 15 31 | 16 10 | 16 49 | 17 29 |      |



# TABVLA POSITIONVM AD 66.

| Eleuatio | 18 | 19   | 20   | 21   | 22   | 23    | 24    | 25    |
|----------|----|------|------|------|------|-------|-------|-------|
|          | 8  | 8    | 8    | 8    | 8    | 8     | 8     | 8     |
|          | 0  | 8 19 | 8 49 | 9 20 | 9 51 | 10 22 | 10 54 | 11 26 |
|          | 1  | 8 0  | 8 28 | 8 58 | 9 28 | 9 58  | 10 29 | 10 59 |
| Decli    | 2  | 7 40 | 8 8  | 8 36 | 9 5  | 9 33  | 10 3  | 10 33 |
|          | 3  | 7 20 | 7 47 | 8 14 | 8 42 | 9 9   | 9 37  | 10 6  |
| natio    | 4  | 7 1  | 7 26 | 7 53 | 8 19 | 8 45  | 9 12  | 9 39  |
|          | 5  | 6 41 | 7 5  | 7 31 | 7 56 | 8 20  | 8 46  | 9 12  |
| AVS      | 6  | 6 22 | 6 45 | 7 8  | 7 32 | 7 56  | 8 21  | 8 45  |
|          | 7  | 6 2  | 6 24 | 6 46 | 7 5  | 7 31  | 7 55  | 8 18  |
| TRA      | 8  | 5 42 | 6 3  | 6 24 | 6 45 | 7 7   | 7 29  | 7 51  |
|          | 9  | 5 22 | 5 41 | 6 2  | 6 22 | 6 42  | 7 3   | 7 23  |
| LIS      | 10 | 5 2  | 5 20 | 5 39 | 5 58 | 6 17  | 6 36  | 6 56  |
|          | 11 | 4 42 | 4 59 | 5 17 | 5 34 | 5 52  | 6 10  | 6 28  |
| supra    | 12 | 4 21 | 4 37 | 4 54 | 5 10 | 5 26  | 5 43  | 6 0   |
|          | 13 | 4 1  | 4 15 | 4 31 | 4 46 | 5 1   | 5 16  | 5 32  |
| terram   | 14 | 3 40 | 3 54 | 4 8  | 4 21 | 4 35  | 4 49  | 5 4   |
|          | 15 | 3 19 | 3 31 | 3 44 | 3 57 | 4 9   | 4 22  | 4 35  |
|          | 16 | 2 58 | 3 9  | 3 21 | 3 32 | 3 43  | 3 55  | 4 6   |
|          | 17 | 2 37 | 2 47 | 2 58 | 3 7  | 3 16  | 3 27  | 3 37  |
| ET       | 18 | 2 15 | 2 24 | 2 33 | 2 41 | 2 49  | 2 58  | 3 7   |
|          | 19 | 1 44 | 2 0  | 2 8  | 2 15 | 2 22  | 2 30  | 2 37  |
| AVS      | 20 | 1 22 | 1 37 | 1 43 | 1 49 | 1 55  | 2 1   | 2 7   |
|          | 21 | 1 9  | 1 13 | 1 18 | 1 23 | 1 27  | 1 31  | 1 36  |
| TRA      | 22 | 0 46 | 0 49 | 0 53 | 0 56 | 0 58  | 1 1   | 1 4   |
|          | 23 | 0 23 | 0 25 | 0 27 | 0 28 | 0 29  | 0 31  | 0 12  |
| LIS      | 24 | 0 0  | 0 0  | 0 0  | 0 0  | 0 0   | 0 0   | 0 0   |
|          | 25 |      |      |      |      |       |       |       |
| sub      | 26 |      |      |      |      |       |       |       |
|          | 27 |      |      |      |      |       |       |       |
| ter      | 28 |      |      |      |      |       |       |       |
| ra.      | 29 |      |      |      |      |       |       |       |
|          | 30 |      |      |      |      |       |       |       |
|          | 31 |      |      |      |      |       |       |       |
|          | 32 |      |      |      |      |       |       |       |



## GRADVS LATITVDINIS.

|    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 0  | 13 33 | 13 7  | 13 42 | 14 17 | 14 53 | 15 31 | 16 10 | 16 49 | 17 29 |      |
| 1  | 12 4  | 12 36 | 13 10 | 13 44 | 14 18 | 14 55 | 15 33 | 16 10 | 16 49 |      |
| 2  | 11 34 | 12 6  | 12 38 | 13 10 | 13 44 | 14 19 | 14 55 | 15 31 | 16 8  |      |
| 3  | 11 5  | 11 35 | 12 6  | 12 37 | 13 9  | 13 43 | 14 17 | 14 52 | 15 27 |      |
| 4  | 10 36 | 11 4  | 11 34 | 12 4  | 12 34 | 13 7  | 13 40 | 14 13 | 14 47 |      |
| 5  | 10 6  | 10 34 | 11 2  | 11 30 | 11 59 | 12 30 | 13 2  | 13 34 | 14 6  |      |
| 6  | 9 37  | 10 3  | 10 30 | 10 57 | 11 24 | 11 54 | 12 24 | 13 54 | 13 25 |      |
| 7  | 9 7   | 9 32  | 9 57  | 10 23 | 10 49 | 11 17 | 11 46 | 12 15 | 12 44 |      |
| 8  | 8 37  | 9 1   | 9 25  | 9 49  | 10 14 | 10 40 | 11 8  | 11 35 | 12 3  |      |
| 9  | 8 7   | 8 29  | 8 52  | 9 15  | 9 38  | 10 3  | 10 29 | 10 55 | 11 21 |      |
| 10 | 7 37  | 7 58  | 8 19  | 8 40  | 9 2   | 9 26  | 9 50  | 10 14 | 10 39 |      |
| 11 | 7 7   | 7 26  | 7 46  | 8 6   | 8 26  | 9 49  | 9 11  | 9 34  | 9 57  |      |
| 12 | 6 36  | 6 54  | 7 13  | 7 31  | 7 50  | 8 11  | 8 32  | 8 53  | 9 14  |      |
| 13 | 6 5   | 6 22  | 6 39  | 6 56  | 7 13  | 7 33  | 7 52  | 8 12  | 8 31  |      |
| 14 | 5 34  | 5 49  | 6 5   | 6 21  | 6 36  | 6 54  | 7 12  | 7 30  | 7 48  |      |
| 15 | 5 2   | 5 16  | 5 31  | 5 45  | 5 59  | 6 15  | 6 32  | 6 48  | 7 4   |      |
| 16 | 4 30  | 4 43  | 4 56  | 5 9   | 5 21  | 5 36  | 5 51  | 6 5   | 6 20  |      |
| 17 | 3 58  | 4 9   | 4 21  | 4 32  | 4 43  | 4 56  | 5 9   | 5 22  | 5 35  |      |
| 18 | 3 26  | 3 35  | 3 45  | 3 54  | 4 4   | 4 15  | 4 27  | 4 38  | 4 49  |      |
| 19 | 2 53  | 3 1   | 3 9   | 3 17  | 3 25  | 3 35  | 3 45  | 3 54  | 4 3   |      |
| 20 | 2 19  | 2 26  | 2 33  | 2 39  | 2 45  | 2 53  | 3 1   | 3 9   | 3 16  |      |
| 21 | 1 46  | 1 50  | 1 56  | 2 0   | 2 5   | 2 11  | 2 17  | 2 23  | 2 29  |      |
| 22 | 1 11  | 1 14  | 1 18  | 1 21  | 1 24  | 1 28  | 1 33  | 1 36  | 1 40  |      |
| 23 | 0 36  | 0 37  | 0 39  | 0 40  | 0 42  | 0 44  | 0 47  | 0 49  | 0 51  |      |
| 24 | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |      |
| 25 |       |       |       |       |       |       |       |       |       |      |
| 26 |       |       |       |       |       |       |       |       |       |      |
| 27 |       |       |       |       |       |       |       |       |       |      |
| 28 |       |       |       |       |       |       |       |       |       |      |
| 29 |       |       |       |       |       |       |       |       |       |      |
| 30 |       |       |       |       |       |       |       |       |       |      |
| 31 |       |       |       |       |       |       |       |       |       |      |
| 32 |       |       |       |       |       |       |       |       |       |      |



# TABVL APOSITIONVM AD 66

| Eleuatio | 35 |    |    | 36 |    |  | 37 |    |  | 38 |    |  | 39 |    |  | 40 |    |  | 41 |    |  | 42 |    |  |
|----------|----|----|----|----|----|--|----|----|--|----|----|--|----|----|--|----|----|--|----|----|--|----|----|--|
|          | g  | g  | /  | g  | /  |  | g  | /  |  | g  | /  |  | g  | /  |  | g  | /  |  | g  | /  |  | g  | /  |  |
| Decli    | 32 | 44 | 7  | 45 | 53 |  | 47 | 42 |  | 49 | 35 |  | 51 | 31 |  | 53 | 33 |  | 55 | 40 |  | 57 | 53 |  |
|          | 31 | 43 | 3  | 44 | 46 |  | 46 | 32 |  | 48 | 22 |  | 50 | 15 |  | 52 | 13 |  | 54 | 15 |  | 56 | 23 |  |
| natio    | 30 | 42 | 1  | 43 | 41 |  | 45 | 24 |  | 47 | 11 |  | 49 | 0  |  | 50 | 55 |  | 52 | 53 |  | 54 | 57 |  |
|          | 29 | 41 | 0  | 42 | 38 |  | 44 | 18 |  | 46 | 2  |  | 47 | 48 |  | 49 | 39 |  | 51 | 34 |  | 53 | 34 |  |
| BORE     | 28 | 40 | 1  | 41 | 37 |  | 43 | 14 |  | 44 | 55 |  | 46 | 38 |  | 48 | 26 |  | 50 | 17 |  | 52 | 14 |  |
|          | 27 | 39 | 4  | 40 | 37 |  | 42 | 12 |  | 43 | 50 |  | 45 | 30 |  | 47 | 15 |  | 49 | 3  |  | 50 | 56 |  |
| ALIS     | 26 | 38 | 8  | 39 | 38 |  | 41 | 11 |  | 42 | 46 |  | 44 | 24 |  | 46 | 6  |  | 47 | 51 |  | 49 | 41 |  |
|          | 25 | 37 | 13 | 38 | 41 |  | 40 | 11 |  | 41 | 43 |  | 43 | 19 |  | 44 | 58 |  | 46 | 41 |  | 48 | 28 |  |
| super    | 24 | 36 | 20 | 37 | 45 |  | 39 | 13 |  | 40 | 43 |  | 42 | 16 |  | 43 | 52 |  | 45 | 32 |  | 47 | 16 |  |
|          | 23 | 35 | 28 | 36 | 51 |  | 38 | 16 |  | 39 | 44 |  | 41 | 14 |  | 42 | 48 |  | 44 | 25 |  | 46 | 6  |  |
| terram   | 22 | 34 | 37 | 35 | 58 |  | 37 | 21 |  | 38 | 46 |  | 40 | 14 |  | 41 | 45 |  | 43 | 20 |  | 44 | 58 |  |
|          | 21 | 33 | 46 | 35 | 5  |  | 36 | 26 |  | 37 | 49 |  | 39 | 15 |  | 40 | 43 |  | 42 | 16 |  | 43 | 51 |  |
|          | 20 | 32 | 56 | 34 | 13 |  | 35 | 32 |  | 36 | 53 |  | 38 | 16 |  | 39 | 43 |  | 41 | 13 |  | 42 | 46 |  |
|          | 19 | 32 | 7  | 33 | 22 |  | 34 | 39 |  | 35 | 58 |  | 37 | 19 |  | 38 | 44 |  | 40 | 11 |  | 41 | 42 |  |
| ET       | 18 | 31 | 19 | 32 | 32 |  | 33 | 47 |  | 35 | 4  |  | 36 | 23 |  | 37 | 45 |  | 39 | 10 |  | 40 | 39 |  |
|          | 17 | 30 | 31 | 31 | 43 |  | 32 | 56 |  | 34 | 11 |  | 35 | 28 |  | 36 | 48 |  | 38 | 11 |  | 39 | 37 |  |
| AVS      | 16 | 29 | 45 | 30 | 55 |  | 32 | 6  |  | 33 | 19 |  | 34 | 34 |  | 35 | 51 |  | 37 | 12 |  | 38 | 36 |  |
|          | 15 | 28 | 59 | 30 | 7  |  | 31 | 16 |  | 32 | 27 |  | 33 | 40 |  | 34 | 56 |  | 36 | 14 |  | 37 | 36 |  |
| TRA      | 14 | 28 | 13 | 29 | 19 |  | 30 | 27 |  | 31 | 36 |  | 32 | 47 |  | 34 | 1  |  | 35 | 17 |  | 36 | 36 |  |
|          | 13 | 27 | 28 | 28 | 32 |  | 29 | 38 |  | 30 | 46 |  | 31 | 54 |  | 33 | 6  |  | 34 | 21 |  | 35 | 38 |  |
| LIS      | 12 | 26 | 44 | 27 | 46 |  | 28 | 50 |  | 29 | 56 |  | 31 | 3  |  | 31 | 12 |  | 33 | 25 |  | 34 | 40 |  |
|          | 11 | 25 | 59 | 27 | 0  |  | 28 | 2  |  | 29 | 6  |  | 30 | 11 |  | 31 | 19 |  | 32 | 30 |  | 33 | 43 |  |
| fub      | 10 | 25 | 16 | 26 | 15 |  | 27 | 15 |  | 28 | 17 |  | 29 | 21 |  | 30 | 26 |  | 31 | 35 |  | 32 | 46 |  |
|          | 9  | 24 | 32 | 25 | 29 |  | 26 | 28 |  | 27 | 28 |  | 28 | 30 |  | 29 | 34 |  | 30 | 41 |  | 31 | 50 |  |
| ter      | 8  | 23 | 49 | 24 | 45 |  | 25 | 42 |  | 26 | 40 |  | 27 | 40 |  | 28 | 42 |  | 29 | 47 |  | 30 | 54 |  |
|          | 7  | 23 | 6  | 24 | 0  |  | 24 | 56 |  | 25 | 52 |  | 26 | 50 |  | 27 | 51 |  | 28 | 54 |  | 29 | 59 |  |
| ra       | 6  | 22 | 23 | 23 | 16 |  | 24 | 10 |  | 25 | 5  |  | 26 | 1  |  | 27 | 0  |  | 28 | 1  |  | 29 | 4  |  |
|          | 5  | 21 | 41 | 22 | 32 |  | 23 | 24 |  | 24 | 17 |  | 25 | 12 |  | 26 | 9  |  | 27 | 8  |  | 28 | 9  |  |
|          | 4  | 20 | 58 | 21 | 48 |  | 22 | 38 |  | 23 | 30 |  | 24 | 23 |  | 25 | 18 |  | 26 | 15 |  | 27 | 15 |  |
|          | 3  | 20 | 16 | 21 | 4  |  | 21 | 53 |  | 22 | 43 |  | 23 | 34 |  | 24 | 27 |  | 25 | 23 |  | 26 | 20 |  |
|          | 2  | 19 | 34 | 20 | 20 |  | 21 | 8  |  | 21 | 56 |  | 22 | 45 |  | 23 | 37 |  | 24 | 30 |  | 25 | 26 |  |
|          | 1  | 18 | 52 | 19 | 37 |  | 20 | 22 |  | 21 | 9  |  | 21 | 57 |  | 22 | 46 |  | 23 | 38 |  | 24 | 32 |  |
|          | 0  | 18 | 10 | 18 | 53 |  | 19 | 37 |  | 20 | 22 |  | 21 | 8  |  | 21 | 56 |  | 22 | 46 |  | 23 | 38 |  |



## GRADVS LATITVDINIS.

|    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51    |   |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
|    | 6     | 6     | 6     | 6     | 6     | 6     | 6     | 6     | 6     | 6 |
| 32 | 60 10 | 62 35 | 65 7  | 67 47 | 70 36 | 73 36 | 76 46 | 80 11 | 83 51 |   |
| 31 | 58 37 | 60 56 | 63 23 | 65 57 | 68 39 | 71 31 | 74 33 | 77 47 | 81 15 |   |
| 30 | 57 7  | 59 21 | 61 43 | 64 11 | 66 47 | 69 32 | 72 26 | 75 32 | 78 50 |   |
| 29 | 55 40 | 57 50 | 60 7  | 62 30 | 65 0  | 67 39 | 70 26 | 73 24 | 76 33 |   |
| 28 | 54 16 | 56 22 | 58 34 | 60 53 | 63 18 | 65 51 | 68 31 | 71 22 | 74 23 |   |
| 27 | 52 54 | 54 57 | 57 5  | 59 19 | 61 39 | 64 7  | 66 42 | 69 16 | 72 21 |   |
| 26 | 51 35 | 53 34 | 55 38 | 57 48 | 60 4  | 62 27 | 64 57 | 67 35 | 70 23 |   |
| 25 | 50 19 | 52 14 | 54 15 | 56 20 | 58 32 | 60 51 | 63 15 | 65 49 | 68 31 |   |
| 24 | 49 4  | 50 56 | 53 53 | 54 55 | 57 3  | 59 17 | 61 37 | 64 6  | 66 42 |   |
| 23 | 47 51 | 49 40 | 51 34 | 53 33 | 55 36 | 57 47 | 60 3  | 62 26 | 64 58 |   |
| 22 | 46 40 | 48 26 | 50 17 | 52 12 | 54 12 | 56 19 | 58 31 | 60 50 | 63 17 |   |
| 21 | 45 31 | 47 14 | 49 1  | 50 53 | 52 50 | 54 53 | 57 1  | 59 17 | 61 39 |   |
| 20 | 44 22 | 46 3  | 47 48 | 49 36 | 51 30 | 53 30 | 55 34 | 57 46 | 60 4  |   |
| 19 | 43 16 | 44 53 | 46 36 | 48 21 | 50 12 | 52 8  | 54 9  | 56 17 | 58 31 |   |
| 18 | 42 10 | 43 45 | 45 25 | 47 8  | 48 55 | 50 48 | 52 46 | 55 50 | 57 0  |   |
| 17 | 41 6  | 42 38 | 44 15 | 45 55 | 47 40 | 49 30 | 51 25 | 53 25 | 55 32 |   |
| 16 | 40 3  | 41 33 | 43 7  | 44 44 | 46 26 | 48 13 | 50 5  | 52 2  | 54 5  |   |
| 15 | 39 0  | 40 28 | 41 59 | 43 35 | 45 14 | 46 58 | 48 46 | 50 40 | 52 40 |   |
| 14 | 37 59 | 39 14 | 40 53 | 42 26 | 44 2  | 45 44 | 47 29 | 49 20 | 51 17 |   |
| 13 | 36 58 | 38 21 | 39 48 | 41 18 | 42 52 | 44 30 | 46 13 | 48 1  | 49 55 |   |
| 12 | 35 58 | 37 19 | 38 43 | 40 11 | 41 43 | 43 18 | 44 58 | 46 43 | 48 34 |   |
| 11 | 34 59 | 36 17 | 37 39 | 39 5  | 40 34 | 42 7  | 43 44 | 45 27 | 47 14 |   |
| 10 | 34 0  | 35 16 | 36 36 | 37 59 | 39 26 | 40 57 | 42 31 | 44 11 | 45 56 |   |
| 9  | 33 2  | 34 16 | 35 34 | 36 54 | 38 19 | 39 47 | 41 19 | 42 56 | 44 38 |   |
| 8  | 32 4  | 33 16 | 34 32 | 35 50 | 37 12 | 38 38 | 40 7  | 41 41 | 43 21 |   |
| 7  | 31 6  | 32 17 | 33 30 | 34 46 | 36 6  | 37 29 | 38 56 | 40 28 | 42 4  |   |
| 6  | 30 9  | 31 18 | 32 29 | 33 43 | 35 0  | 36 21 | 37 46 | 39 15 | 40 48 |   |
| 5  | 29 13 | 30 19 | 31 28 | 32 40 | 33 55 | 35 14 | 36 36 | 38 2  | 39 33 |   |
| 4  | 28 16 | 29 20 | 30 28 | 31 37 | 32 50 | 34 6  | 35 26 | 36 50 | 38 18 |   |
| 3  | 27 20 | 28 22 | 29 27 | 30 35 | 31 45 | 32 59 | 34 16 | 35 38 | 37 4  |   |
| 2  | 26 24 | 27 24 | 28 27 | 29 32 | 30 41 | 31 52 | 33 7  | 34 26 | 35 49 |   |
| 1  | 25 28 | 26 26 | 27 27 | 28 30 | 29 36 | 30 46 | 31 58 | 33 15 | 34 35 |   |
| 0  | 24 32 | 25 28 | 26 27 | 27 28 | 28 32 | 29 39 | 30 49 | 32 3  | 33 21 |   |

poli



# TABVLA POSITIONVM AD 66

| Eleuatio | 35 | 36    | 37    | 38    | 39    | 40    | 41    | 42    |
|----------|----|-------|-------|-------|-------|-------|-------|-------|
|          | 0  | 1     | 2     | 3     | 4     | 5     | 6     | 7     |
| Decli    | 0  | 18 10 | 18 53 | 19 37 | 20 22 | 21 8  | 21 56 | 22 46 |
| natio    | 1  | 17 28 | 18 9  | 18 52 | 19 35 | 20 19 | 21 6  | 21 54 |
| AVS      | 2  | 16 46 | 17 26 | 18 6  | 18 48 | 19 31 | 20 15 | 21 2  |
| TRA      | 3  | 16 4  | 16 42 | 17 21 | 18 1  | 18 42 | 19 25 | 20 0  |
| LIS      | 4  | 15 22 | 15 58 | 16 36 | 17 14 | 17 51 | 18 34 | 19 17 |
| super    | 5  | 14 39 | 15 14 | 15 50 | 16 27 | 17 4  | 17 43 | 18 24 |
| terram   | 6  | 13 57 | 14 30 | 15 4  | 15 39 | 16 15 | 16 52 | 17 31 |
| ET       | 7  | 13 14 | 13 46 | 14 18 | 14 52 | 15 26 | 16 1  | 16 38 |
| BORE     | 8  | 12 31 | 13 1  | 13 32 | 14 4  | 14 36 | 15 10 | 15 45 |
| ALIS     | 9  | 11 48 | 12 17 | 12 46 | 13 16 | 13 46 | 14 18 | 14 51 |
| sub      | 10 | 11 4  | 11 31 | 11 59 | 12 27 | 12 55 | 13 26 | 13 57 |
| terra.   | 11 | 10 21 | 10 46 | 11 12 | 11 38 | 12 5  | 12 33 | 13 2  |
|          | 12 | 9 36  | 10 0  | 10 24 | 10 48 | 11 13 | 11 40 | 12 7  |
|          | 13 | 8 52  | 9 14  | 9 36  | 9 58  | 10 22 | 10 46 | 11 11 |
|          | 14 | 8 7   | 8 27  | 8 47  | 9 8   | 9 29  | 9 51  | 10 15 |
|          | 15 | 7 21  | 7 39  | 7 58  | 8 17  | 8 36  | 8 56  | 9 18  |
|          | 16 | 6 35  | 6 51  | 7 8   | 7 25  | 7 42  | 8 1   | 8 20  |
|          | 17 | 5 48  | 6 3   | 6 18  | 6 33  | 6 48  | 7 4   | 7 21  |
|          | 18 | 5 1   | 5 14  | 5 27  | 5 40  | 5 53  | 6 7   | 6 22  |
|          | 19 | 4 13  | 4 24  | 4 35  | 4 46  | 4 57  | 5 8   | 5 21  |
|          | 20 | 3 24  | 3 33  | 3 42  | 3 51  | 4 0   | 4 9   | 4 19  |
|          | 21 | 2 34  | 2 41  | 2 48  | 2 55  | 3 1   | 3 9   | 3 16  |
|          | 22 | 1 43  | 1 48  | 1 53  | 1 58  | 2 2   | 2 7   | 2 12  |
|          | 23 | 0 52  | 0 55  | 0 58  | 1 0   | 1 2   | 1 4   | 1 7   |
|          | 24 | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |
|          | 25 |       |       |       |       |       |       |       |
|          | 26 |       |       |       |       |       |       |       |
|          | 27 |       |       |       |       |       |       |       |
|          | 28 |       |       |       |       |       |       |       |
|          | 29 |       |       |       |       |       |       |       |
|          | 30 |       |       |       |       |       |       |       |
|          | 31 |       |       |       |       |       |       |       |
|          | 32 |       |       |       |       |       |       |       |



## GRADVS LATITVDINIS.

|    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51    | poli |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 0  | 24 32 | 25 28 | 26 27 | 27 28 | 28 32 | 29 39 | 30 49 | 32 3  | 33 21 |      |
| 1  | 23 36 | 24 30 | 25 27 | 26 26 | 27 28 | 28 32 | 29 40 | 30 51 | 32 7  |      |
| 2  | 22 40 | 23 32 | 24 17 | 25 24 | 26 23 | 27 26 | 28 31 | 29 40 | 30 53 |      |
| 3  | 21 44 | 22 34 | 23 27 | 24 21 | 25 19 | 26 19 | 27 22 | 28 28 | 29 38 |      |
| 4  | 20 48 | 21 36 | 22 26 | 23 19 | 24 14 | 25 12 | 26 12 | 27 16 | 28 24 |      |
| 5  | 19 51 | 20 37 | 21 26 | 22 16 | 23 9  | 24 4  | 25 2  | 26 4  | 27 9  |      |
| 6  | 18 55 | 19 38 | 20 25 | 21 13 | 22 4  | 22 57 | 23 52 | 24 51 | 25 54 |      |
| 7  | 17 58 | 18 39 | 19 24 | 20 10 | 20 58 | 21 49 | 22 42 | 23 38 | 24 38 |      |
| 8  | 17 0  | 17 40 | 18 22 | 19 6  | 19 52 | 20 40 | 21 31 | 22 25 | 23 21 |      |
| 9  | 16 2  | 16 40 | 17 20 | 18 2  | 18 45 | 19 31 | 20 19 | 21 10 | 22 4  |      |
| 10 | 15 4  | 15 40 | 16 18 | 16 57 | 17 38 | 18 21 | 19 7  | 19 55 | 20 46 |      |
| 11 | 14 5  | 14 39 | 15 14 | 15 51 | 16 30 | 17 11 | 17 54 | 18 39 | 19 28 |      |
| 12 | 13 6  | 13 37 | 14 11 | 14 45 | 15 21 | 16 0  | 16 40 | 17 23 | 18 8  |      |
| 13 | 12 6  | 12 35 | 13 6  | 13 38 | 14 12 | 14 48 | 15 25 | 16 5  | 16 47 |      |
| 14 | 11 5  | 11 32 | 12 1  | 12 30 | 13 2  | 13 34 | 14 9  | 14 46 | 15 25 |      |
| 15 | 10 4  | 10 28 | 10 55 | 11 21 | 11 50 | 13 20 | 12 52 | 13 26 | 14 2  |      |
| 16 | 9 1   | 9 23  | 9 47  | 10 12 | 10 38 | 11 5  | 11 33 | 12 4  | 12 37 |      |
| 17 | 7 58  | 8 18  | 8 39  | 9 1   | 9 24  | 9 48  | 10 13 | 10 41 | 11 10 |      |
| 18 | 6 54  | 7 11  | 7 29  | 7 48  | 8 9   | 8 30  | 8 52  | 9 16  | 9 42  |      |
| 19 | 5 48  | 6 3   | 6 18  | 6 35  | 6 52  | 7 10  | 6 29  | 7 49  | 8 11  |      |
| 20 | 4 42  | 4 53  | 5 6   | 5 20  | 5 34  | 5 48  | 6 4   | 6 20  | 6 38  |      |
| 21 | 3 33  | 3 42  | 3 53  | 4 3   | 4 14  | 4 25  | 4 37  | 4 49  | 5 3   |      |
| 22 | 2 24  | 2 38  | 2 37  | 2 44  | 2 52  | 2 59  | 3 7   | 3 16  | 3 25  |      |
| 23 | 1 13  | 1 16  | 1 20  | 1 23  | 1 27  | 1 31  | 1 35  | 1 40  | 1 44  |      |
| 24 | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |      |
| 25 |       |       |       |       |       |       |       |       |       |      |
| 26 |       |       |       |       |       |       |       |       |       |      |
| 27 |       |       |       |       |       |       |       |       |       |      |
| 28 |       |       |       |       |       |       |       |       |       |      |
| 29 |       |       |       |       |       |       |       |       |       |      |
| 30 |       |       |       |       |       |       |       |       |       |      |
| 31 |       |       |       |       |       |       |       |       |       |      |
| 32 |       |       |       |       |       |       |       |       |       |      |



# TABVLA POSITIONVM AD 66.

| Eleuatio | 52       | 53             | 54             | 55             | 56              | 57               | 58              | 59               |                 |
|----------|----------|----------------|----------------|----------------|-----------------|------------------|-----------------|------------------|-----------------|
|          | 8        | 8              | 8              | 8              | 8               | 8                | 8               | 8                |                 |
| Decli    | 32<br>31 | 87 51<br>85 0  | 92 14<br>89 6  | 97 7<br>93 36  | 102 40<br>98 36 | 109 13<br>104 18 | 114 31<br>111 1 | 135 28<br>119 32 | 137 49          |
| natio    | 30<br>29 | 82 23<br>79 56 | 86 14<br>83 34 | 90 25<br>87 32 | 95 2<br>91 50   | 100 12<br>46 36  | 106 4<br>101 55 | 112 59<br>107 59 | 121 44<br>114 7 |
| BORE     | 28<br>27 | 77 37<br>75 26 | 81 6<br>28 46  | 84 50<br>82 20 | 88 54<br>86 11  | 93 21<br>90 24   | 98 17<br>95 0   | 103 47<br>100 6  | 110 3<br>105 49 |
| ALIS     | 26<br>25 | 73 22<br>71 23 | 76 33<br>74 17 | 79 58<br>77 44 | 83 39<br>81 15  | 87 38<br>85 4    | 92 0<br>89 13   | 96 47<br>93 44   | 102 5<br>98 43  |
| super    | 24<br>23 | 69 28<br>67 38 | 72 26<br>70 30 | 75 36<br>73 33 | 78 59<br>76 49  | 82 38<br>80 20   | 86 36<br>84 8   | 90 54<br>88 15   | 95 38<br>92 46  |
| terram   | 22<br>21 | 65 52<br>64 10 | 68 38<br>66 50 | 71 35<br>69 42 | 74 44<br>72 45  | 78 8<br>76 1     | 81 47<br>79 33  | 85 45<br>83 22   | 90 4<br>87 31   |
|          | 20<br>19 | 62 30<br>60 53 | 65 6<br>63 24  | 67 52<br>66 5  | 70 49<br>68 57  | 73 59<br>72 1    | 77 24<br>75 20  | 81 5<br>78 54    | 85 6<br>82 47   |
| ET       | 18<br>17 | 59 18<br>57 46 | 61 46<br>60 9  | 64 22<br>62 41 | 67 9<br>65 23   | 70 8<br>68 17    | 73 20<br>71 24  | 76 48<br>74 46   | 80 33<br>78 24  |
| AUS      | 16<br>15 | 56 16<br>54 48 | 58 35<br>57 3  | 61 3<br>59 26  | 63 40<br>62 0   | 66 29<br>64 44   | 69 31<br>67 41  | 72 42<br>70 51   | 76 19<br>74 18  |
| TRA      | 14<br>13 | 53 21<br>51 55 | 55 32<br>54 3  | 57 52<br>56 20 | 60 22<br>58 45  | 63 2<br>61 21    | 65 54<br>64 9   | 68 59<br>67 9    | 72 20<br>70 25  |
| LIS      | 12<br>11 | 50 31<br>49 8  | 52 36<br>51 10 | 54 48<br>53 19 | 57 10<br>55 37  | 59 42<br>58 5    | 62 25<br>60 44  | 65 21<br>63 36   | 68 32<br>66 42  |
| sub      | 10<br>9  | 47 47<br>46 26 | 49 45<br>48 21 | 51 51<br>50 23 | 54 5<br>52 35   | 56 29<br>54 55   | 59 4<br>57 26   | 61 51<br>60 0    | 64 53<br>63 6   |
| terra    | 8<br>7   | 45 6<br>43 46  | 46 58<br>45 36 | 48 57<br>47 32 | 51 5<br>49 36   | 53 21<br>51 49   | 55 49<br>54 13  | 58 28<br>56 48   | 61 21<br>59 36  |
|          | 6<br>5   | 42 28<br>41 10 | 44 14<br>42 53 | 46 7<br>44 43  | 48 8<br>46 41   | 50 18<br>48 47   | 52 38<br>51 3   | 55 9<br>54 31    | 57 53<br>55 11  |
|          | 4<br>3   | 39 52<br>38 35 | 41 32<br>40 12 | 43 19<br>41 56 | 45 14<br>43 47  | 47 17<br>45 47   | 49 30<br>47 57  | 51 53<br>50 17   | 54 30<br>52 49  |
|          | 2<br>1   | 37 18<br>36 1  | 38 52<br>37 33 | 40 33<br>39 11 | 42 22<br>40 56  | 44 18<br>42 49   | 46 24<br>44 51  | 48 40<br>47 4    | 51 9<br>49 29   |
|          | 0        | 34 44          | 36 13          | 37 48          | 39 30           | 41 20            | 43 19           | 45 28            | 47 49           |



## GRADVS LATITVDINIS.

|    | 60  | 61 | 62  | 63 | 64  | 65 | 66  |    |
|----|-----|----|-----|----|-----|----|-----|----|
| 32 | 180 | 0  |     |    |     |    |     |    |
| 31 | 180 | 0  |     |    |     |    |     |    |
| 30 | 140 | 27 | 180 | 0  |     |    |     |    |
| 29 | 124 | 13 | 143 | 27 | 180 |    |     |    |
| 28 | 112 | 31 | 126 | 52 | 146 | 53 | 180 | 0  |
| 27 | 112 | 24 | 120 | 16 | 130 | 16 | 150 | 55 |
| 26 | 108 | 6  | 115 | 5  | 123 | 25 | 134 | 6  |
| 25 | 104 | 19 | 110 | 43 | 118 | 10 | 127 | 9  |
| 24 | 100 | 54 | 106 | 53 | 112 | 45 | 121 | 49 |
| 23 | 97  | 47 | 103 | 26 | 209 | 51 | 117 | 20 |
| 22 | 94  | 52 | 109 | 15 | 106 | 20 | 113 | 23 |
| 21 | 92  | 7  | 97  | 17 | 103 | 5  | 109 | 48 |
| 20 | 89  | 32 | 94  | 30 | 100 | 5  | 106 | 30 |
| 19 | 87  | 4  | 91  | 51 | 90  | 15 | 103 | 26 |
| 18 | 84  | 42 | 89  | 20 | 94  | 33 | 100 | 32 |
| 17 | 82  | 26 | 86  | 55 | 81  | 59 | 97  | 47 |
| 16 | 80  | 14 | 84  | 36 | 89  | 31 | 95  | 10 |
| 15 | 78  | 6  | 82  | 21 | 87  | 9  | 92  | 39 |
| 14 | 76  | 2  | 80  | 11 | 84  | 51 | 90  | 13 |
| 13 | 74  | 1  | 78  | 4  | 82  | 37 | 87  | 52 |
| 12 | 72  | 3  | 76  | 0  | 80  | 26 | 85  | 35 |
| 11 | 80  | 8  | 73  | 59 | 78  | 20 | 83  | 71 |
| 10 | 68  | 14 | 72  | 0  | 76  | 15 | 81  | 10 |
| 9  | 66  | 22 | 70  | 3  | 74  | 13 | 76  | 2  |
| 8  | 64  | 32 | 68  | 8  | 72  | 13 | 76  | 56 |
| 7  | 62  | 44 | 67  | 15 | 70  | 14 | 74  | 52 |
| 6  | 60  | 56 | 64  | 23 | 68  | 17 | 72  | 49 |
| 5  | 59  | 10 | 62  | 32 | 66  | 21 | 70  | 48 |
| 4  | 57  | 24 | 60  | 42 | 64  | 26 | 68  | 48 |
| 3  | 55  | 49 | 58  | 53 | 62  | 32 | 66  | 49 |
| 2  | 53  | 55 | 57  | 4  | 60  | 39 | 64  | 51 |
| 1  | 53  | 11 | 55  | 15 | 58  | 46 | 62  | 53 |
| 0  | 50  | 27 | 53  | 27 | 56  | 53 | 60  | 55 |

poli



# TABVLA POSITIONVM AD 66.

| Eleuatio | 52 | 53    | 54    | 55    | 56    | 57    | 58    | 59    |       |
|----------|----|-------|-------|-------|-------|-------|-------|-------|-------|
|          | 0  | 34 44 | 36 13 | 37 48 | 39 30 | 41 20 | 43 19 | 45 28 | 47 49 |
|          | 1  | 33 27 | 34 53 | 36 25 | 38 4  | 39 51 | 41 47 | 43 52 | 46 9  |
| Decli    | 2  | 32 10 | 33 34 | 35 3  | 36 38 | 38 22 | 40 14 | 42 16 | 44 29 |
|          | 3  | 30 53 | 32 14 | 33 40 | 35 13 | 36 53 | 38 41 | 40 39 | 42 49 |
| natio    | 4  | 29 36 | 30 54 | 32 17 | 33 46 | 35 23 | 37 8  | 39 3  | 41 8  |
|          | 5  | 28 18 | 29 33 | 30 53 | 32 19 | 33 53 | 35 35 | 37 25 | 39 27 |
| AVS      | 6  | 27 0  | 28 12 | 29 29 | 30 52 | 32 22 | 34 0  | 35 47 | 37 45 |
| TRA      | 7  | 25 42 | 26 50 | 28 4  | 29 24 | 30 51 | 32 25 | 34 8  | 36 2  |
|          | 8  | 24 22 | 25 28 | 26 39 | 27 55 | 29 19 | 30 49 | 32 28 | 34 17 |
| LIS      | 9  | 23 2  | 24 5  | 25 13 | 26 26 | 27 45 | 29 12 | 30 47 | 32 32 |
|          | 10 | 21 41 | 22 41 | 23 45 | 24 55 | 26 11 | 27 34 | 29 5  | 30 45 |
| super    | 11 | 20 20 | 21 16 | 22 17 | 23 23 | 24 35 | 25 44 | 27 20 | 28 56 |
|          | 12 | 18 57 | 19 50 | 20 48 | 21 50 | 23 58 | 24 13 | 25 35 | 27 6  |
| terram   | 13 | 17 33 | 18 23 | 19 16 | 20 15 | 21 19 | 22 29 | 23 47 | 25 13 |
|          | 14 | 16 7  | 16 54 | 17 44 | 18 38 | 19 38 | 20 44 | 21 57 | 23 18 |
|          | 15 | 14 40 | 15 23 | 16 10 | 17 0  | 17 56 | 18 57 | 20 5  | 21 20 |
| ET       | 16 | 13 12 | 13 51 | 14 33 | 15 20 | 16 11 | 17 7  | 18 9  | 19 19 |
|          | 17 | 11 42 | 12 17 | 12 55 | 13 37 | 14 23 | 15 14 | 16 10 | 17 14 |
| BORE     | 18 | 10 10 | 10 40 | 11 14 | 11 51 | 12 32 | 13 18 | 14 8  | 15 5  |
|          | 19 | 8 35  | 9 2   | 9 31  | 10 3  | 10 39 | 11 18 | 12 2  | 12 51 |
| ALIS     | 20 | 6 58  | 7 20  | 7 44  | 8 11  | 8 41  | 9 14  | 9 51  | 10 32 |
|          | 21 | 5 18  | 5 36  | 5 54  | 6 15  | 6 39  | 7 5   | 7 34  | 8 7   |
| sub      | 22 | 3 36  | 3 48  | 4 1   | 4 16  | 4 32  | 4 51  | 5 11  | 5 34  |
|          | 23 | 1 50  | 1 56  | 2 3   | 2 11  | 2 20  | 2 30  | 2 41  | 2 52  |
| ter      | 24 | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |
|          | 25 |       |       |       |       |       |       |       |       |
| ra       | 26 |       |       |       |       |       |       |       |       |
|          | 27 |       |       |       |       |       |       |       |       |
|          | 28 |       |       |       |       |       |       |       |       |
|          | 29 |       |       |       |       |       |       |       |       |
|          | 30 |       |       |       |       |       |       |       |       |
|          | 31 |       |       |       |       |       |       |       |       |
|          | 32 |       |       |       |       |       |       |       |       |

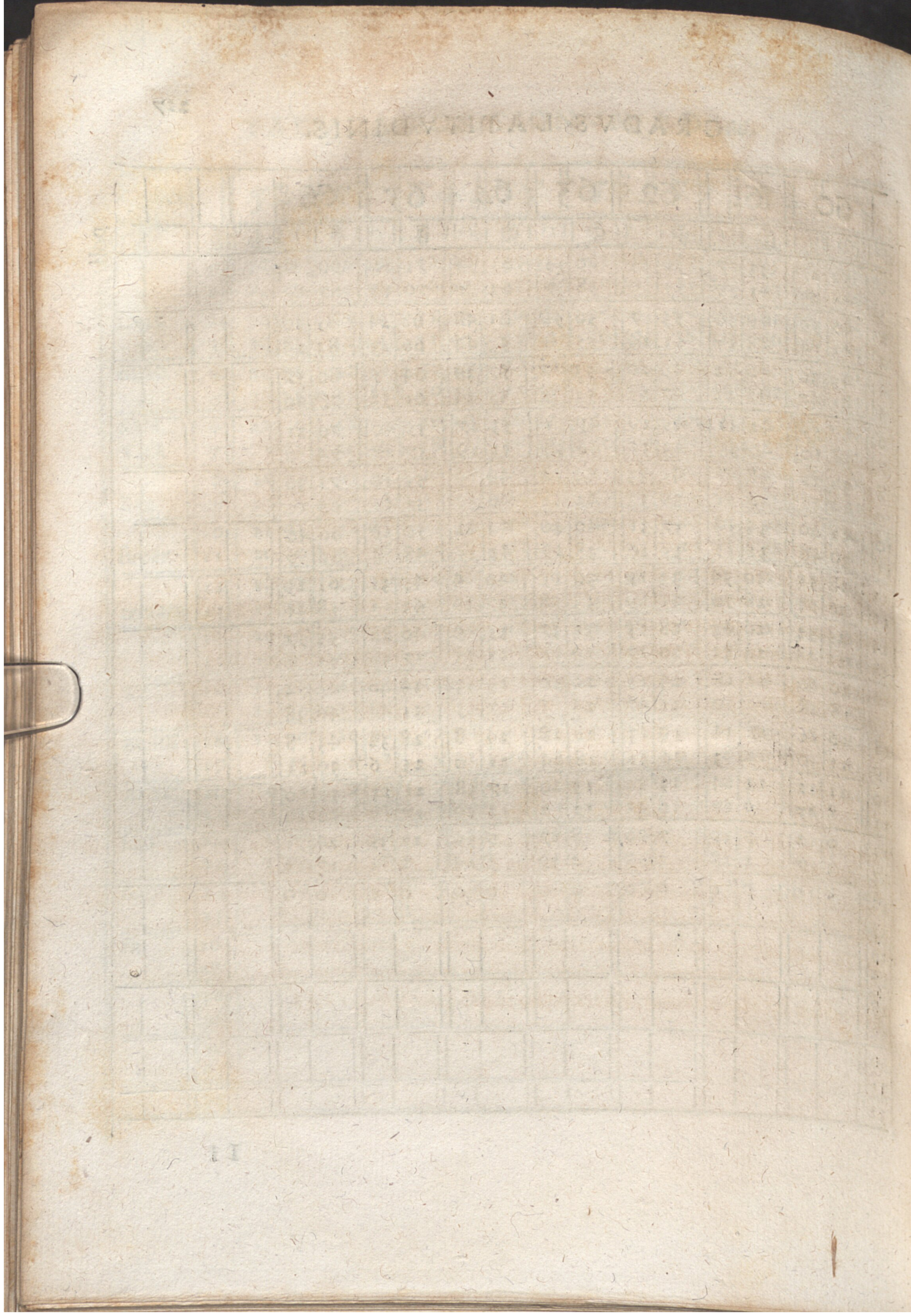


## GRADVS LATITVDINIS.

|    | 60    | 61    | 62    | 63    | 64    | 65    | 66    |  |  |  |
|----|-------|-------|-------|-------|-------|-------|-------|--|--|--|
| g  | g     | g     | g     | g     | g     | g     | g     |  |  |  |
| 0  | 50 27 | 53 27 | 56 53 | 60 25 | 63 54 | 72 42 | 90 0  |  |  |  |
| 1  | 48 43 | 51 39 | 55 0  | 58 57 | 63 51 | 70 33 | 87 45 |  |  |  |
| 2  | 46 59 | 49 50 | 53 7  | 56 59 | 61 48 | 68 24 | 85 30 |  |  |  |
| 3  | 45 14 | 48 11 | 51 14 | 55 1  | 59 44 | 66 15 | 83 14 |  |  |  |
| 4  | 43 30 | 46 12 | 49 20 | 53 2  | 57 39 | 64 5  | 80 57 |  |  |  |
| 5  | 41 44 | 44 22 | 47 25 | 51 2  | 55 34 | 61 53 | 78 40 |  |  |  |
| 6  | 39 59 | 42 31 | 45 29 | 49 1  | 53 27 | 59 40 | 76 21 |  |  |  |
| 7  | 38 50 | 40 39 | 43 32 | 46 58 | 51 19 | 57 26 | 74 0  |  |  |  |
| 8  | 36 22 | 38 46 | 41 33 | 44 54 | 49 9  | 55 10 | 71 36 |  |  |  |
| 9  | 34 32 | 36 51 | 39 33 | 42 48 | 46 57 | 52 51 | 69 10 |  |  |  |
| 10 | 32 40 | 34 54 | 37 31 | 40 40 | 44 42 | 50 29 | 66 40 |  |  |  |
| 11 | 30 46 | 32 55 | 35 26 | 38 29 | 42 25 | 48 4  | 64 7  |  |  |  |
| 12 | 28 51 | 30 54 | 33 19 | 36 15 | 40 4  | 45 35 | 61 29 |  |  |  |
| 13 | 26 53 | 28 50 | 31 9  | 33 58 | 37 39 | 43 1  | 58 46 |  |  |  |
| 14 | 24 52 | 26 43 | 28 55 | 31 37 | 35 9  | 40 22 | 55 57 |  |  |  |
| 15 | 22 48 | 24 33 | 26 37 | 29 11 | 32 35 | 37 38 | 53 0  |  |  |  |
| 16 | 20 40 | 22 18 | 24 15 | 26 50 | 29 53 | 34 46 | 49 54 |  |  |  |
| 17 | 18 28 | 19 59 | 21 47 | 24 3  | 27 5  | 31 44 | 46 38 |  |  |  |
| 18 | 16 12 | 17 34 | 19 13 | 21 18 | 24 8  | 28 32 | 43 8  |  |  |  |
| 19 | 13 50 | 15 3  | 16 31 | 18 24 | 21 0  | 25 6  | 39 21 |  |  |  |
| 20 | 11 22 | 12 24 | 13 41 | 15 20 | 17 38 | 21 23 | 35 10 |  |  |  |
| 21 | 8 47  | 9 27  | 10 41 | 12 2  | 13 59 | 17 19 | 30 26 |  |  |  |
| 22 | 6 2   | 7 39  | 7 26  | 8 27  | 9 59  | 12 39 | 24 51 |  |  |  |
| 23 | 3 7   | 3 28  | 3 55  | 4 30  | 5 24  | 7 11  | 17 34 |  |  |  |
| 24 | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |  |  |  |
| 25 |       |       |       |       |       |       |       |  |  |  |
| 26 |       |       |       |       |       |       |       |  |  |  |
| 27 |       |       |       |       |       |       |       |  |  |  |
| 28 |       |       |       |       |       |       |       |  |  |  |
| 29 |       |       |       |       |       |       |       |  |  |  |
| 30 |       |       |       |       |       |       |       |  |  |  |
| 31 |       |       |       |       |       |       |       |  |  |  |
| 32 |       |       |       |       |       |       |       |  |  |  |

poli







# NOVA PARALLELO- RVM ET CLIMATVM TABVLA INSER-

uiens nostræ ætati, qua Solis maxima obliquatio partium est

23. scr. 28'. 3" o. ferè, antea quidem ædita, sed  
nunc recens emendata.

CLARISSIMO ET DOCTISSIMO VIRO  
D. Casparo Crucigero Theologiæ Doctori S. D. Erasmus  
Reinholdus Salueldensis.

**P**Et iuit à me hisce diebus typographus, ut tabellis ascensionum, quæ ad enarrationem sphericæ libel-  
li utiliter adhibentur, aliquid eiusdem generis adiungerem. Quare cum ingens in lectione histori-  
arum subsidium sit, habere animo bene informatam Climatvm & Parallelorum distributionem, erant  
ei hunc locum excerpturus ex Astronomico opere Ptolemæi. Cum autem uiderem ab ipso Ptolemæo ne-  
gligentius descripta esse borealia loca, & ob mutatam maximam Solis declinationem ipsam quoq; pa-  
rallelorum rationem ad ueterum descriptiones non amplius congruere, putavi me operæ pretium factu-  
rum, si nouam Parallelorum tabulam conderem. Veniam meretur Ptolemæus princeps nostræ artis,  
quod hæc loca ueteribus parum nota erant, nec illa tempestate fortassis admodum culta. Nunc autem  
cum Ecclesia CHRISTI tyrannide & furore impiorum pulsa ex florentissima parte mundi uelut in  
desertum abdiderit se in hæc loca septentrionalia, quid obstat, quò minus & has nouas Ecclesiæ sedes be-  
ne iam excultas maiori cura atq; diligentia describamus, præsertim cum & hæ nostræ mathematicæ ar-  
tes magno beneficio Dei ostensæ hominibus imprimis Ecclesiæ seruire debeant? Existimo autem hanc  
rationem, qua in distribuendis parallelis usi sumus, discentibus elementa harum artium multum profu-  
turam esse. Nec dubito, quin docti passim in his septentrionalibus locis deinceps accuratius sint animad-  
uersuri altitudinem poli, siquidem ea ex magnitudine diei solstitialis aut continua luce aliquot dierum  
facilime dijudicari potest. Et hanc meam opellam duxi studiosis omnibus sub auspicio nominis tui com-  
municandam, tum quia mathematicas disciplinas omnes inter reliquas tuas grauissimas occupationes nō  
solum studiose colis, sed præclare tenes, tum quia singulari quadam beneuolentia me semper complexus  
es. Quare & deinceps me tibi commendo, ac Deum æternum Patrem liberatoris nostri IESV CHRIS-  
TI præcor, ut te insigne decus suæ Ecclesiæ diu seruet incolumem, Et has nostras sedes aduersus Turci-  
sam rabiem defendat ac tueatur. Vale ex nostro museo Calend. Aug. 1545.



# PRIOR PARSTABVLÆ, in qua

Sex Amphificij. Omnes Heteroscij usq; ad XLVIII. paralle-

| N V M E R V S<br>Parallelorum. |        | CLIMA=<br>T A. | Eleuatio<br>poli. |      | Magnitudines ma-<br>ximarum dierum<br>& noctium. |      |
|--------------------------------|--------|----------------|-------------------|------|--------------------------------------------------|------|
| P R I O R.                     | Ptole. |                | g.                | scr. | Horę                                             | scr. |
| I.                             | 1      |                | 0                 | 0    | 12                                               | 0    |
| II.                            | 2      |                | 4                 | 18   | 12                                               | 15   |
| III.                           | 3      |                | 8                 | 34   | 12                                               | 30   |
| IIII.                          | 4      | Initium.       | 12                | 43   | 12                                               | 45   |
| V.                             | 5      | I. Clima.      | 16                | 44   | 13                                               | 0    |
| VI.                            | 6      | Finis.         | 20                | 34   | 13                                               | 15   |
| VII.                           | 7      | II.            | 24                | 11   | 13                                               | 30   |
| VIII.                          | 8      |                | 27                | 36   | 13                                               | 45   |
| IX.                            | 9      | III.           | 30                | 48   | 14                                               | 0    |
| X.                             | 10     |                | 33                | 46   | 14                                               | 15   |
| XI.                            | 11     | IIII.          | 36                | 30   | 14                                               | 30   |
| XII.                           | 12     |                | 39                | 3    | 14                                               | 45   |
| XIII.                          | 13     | V.             | 41                | 23   | 15                                               | 0    |
| XIIII.                         | 14     |                | 43                | 32   | 15                                               | 15   |
| XV.                            | 15     | VI.            | 45                | 31   | 15                                               | 30   |
| XVI.                           | 16     |                | 47                | 21   | 15                                               | 45   |
| XVII.                          | 17     | VII.           | 49                | 1    | 16                                               | 0    |
| XVIII.                         | 18     | Hicue-         | 50                | 34   | 16                                               | 15   |
| XIX.                           | 19     | teres o=       | 51                | 59   | 16                                               | 30   |
| XX.                            | 20     | lim desie-     | 53                | 17   | 16                                               | 45   |
| XXI.                           | 21     | runt nu=       | 54                | 30   | 17                                               | 0    |
| XXII.                          | 22     | merare         | 55                | 36   | 17                                               | 15   |
| XXIII.                         | 23     | climata,       | 56                | 38   | 17                                               | 30   |
| XXIIII.                        | 24     | quia re-       | 57                | 34   | 17                                               | 45   |



paralleli inuicem disiunguntur quadrantibus horarum.

| paral-<br>leli | Vmbrarū Meridianorum rati-<br>ones, qualium gnomon 60. |      |                   |      |               |      | LOCA BOREALIA, per quæ scri-<br>buntur paralleli. |  |
|----------------|--------------------------------------------------------|------|-------------------|------|---------------|------|---------------------------------------------------|--|
| prio-<br>res.  | par                                                    | scr. | par               | scr. | par           | scr. |                                                   |  |
| 1              | 26                                                     | 4    | 0                 | 0    | 26            | 4    | Sub æquinoctiali.                                 |  |
| 2              | 20                                                     | 51   | 4                 | 31   | 31            | 37   | Per insulam Tabrobanen.                           |  |
| 3              | 15                                                     | 58   | 9                 | 2    | 37            | 30   | Per sinum Analitum.                               |  |
| 4              | 11                                                     | 24   | 13                | 32   | 43            | 54   | Per sinum Adaliticum.                             |  |
| 5              | 7                                                      | 6    | 18                | 2    | 50            | 42   | Per insulam Meroen & Calecutum.                   |  |
| 6              | 3                                                      | 6    | 22                | 30   | 58            | 1    | Per Napata.                                       |  |
| 7              | 0                                                      | 44   | 26                | 57   | 65            | 51   | Per Syenen sub tropico cancri.                    |  |
| 8              | 4                                                      | 20   | 31                | 22   | 74            | 18   | Per Prolemaiden in Thebaide.                      |  |
| 9              | 7                                                      | 42   | 35                | 45   | 83            | 24   | Per Alexandriam, Ægypti, Hierosolimas.            |  |
| 10             | 10                                                     | 53   | 40                | 6    | 93            | 13   | Per mediam Phenicen & Susam.                      |  |
| 11             | 13                                                     | 53   | 44                | 24   | 103           | 50   | Per Peloponesum, Rhodum, Babylonem.               |  |
| 12             | 16                                                     | 43   | 48                | 40   | 115           | 21   | Per Lisbonam, Calabriam, Smirnen.                 |  |
| 13             | 19                                                     | 23   | 52                | 52   | 127           | 51   | Per Corsicam, Romam, Hellespontum.                |  |
| 14             | 21                                                     | 55   | 57                | 1    | 141           | 27   | Per Tolosam, Massiliam, Byzantium.                |  |
| 15             | 24                                                     | 18   | 61                | 6    | 156           | 17   | Per Lugdunum, Mediolanum, Venetias.               |  |
| 16             | 26                                                     | 33   | 65                | 7    | 172           | 30   | Per fontes Istri Budam, Ostia Boristhenis.        |  |
| 17             | 28                                                     | 41   | 69                | 4    | 190           | 16   | Per Podoliam & Tartariam minorem.                 |  |
| 18             | 30                                                     | 41   | 72                | 57   | 209           | 48   | Per Erfordiam, & Cracouiam.                       |  |
| 19             | 32                                                     | 35   | 76                | 45   | 231           | 22   | Per Vuitebergam.                                  |  |
| 20             | 34                                                     | 23   | 80                | 28   | 255           | 9    | Per Pomeraniam.                                   |  |
| 21             | 36                                                     | 5    | 84                | 6    | 281           | 34   | Per Grypswaldum & Rostochium et                   |  |
| 22             | 37                                                     | 42   | 87                | 38   | 311           | 0    | Per Holsatiam Regium montem Brussiae.             |  |
| 23             | 39                                                     | 11   | 91                | 5    | 343           | 54   | Per Hiberniam & Mosconiam.                        |  |
| 24             | 40                                                     | 37   | 94                | 26   | 380           | 50   | Per S. Andream scotiae & Hafniam Daniae.          |  |
|                | Solstici-<br>alis                                      |      | Aequi-<br>noctia. |      | Bruma-<br>lis |      |                                                   |  |



# RELIQVVM PRIORIS PARTIS

| NUMERVS<br>Parallelorum |        | CLIMA=<br>TA | LATI=<br>TUDO<br>regionis |                  | Magnitudines<br>maximarū die-<br>rum & noctū |      |
|-------------------------|--------|--------------|---------------------------|------------------|----------------------------------------------|------|
| PRIOR                   | Prole. |              | Gra.                      | scr.             | Hore                                         | scr. |
| XXV                     | 25     | liqua lo-    | 58                        | 27               | 18                                           | 0    |
| XXVI                    |        | caminus      | 59                        | 15               | 18                                           | 15   |
| XXVII                   | 26     | culta erant  | 59                        | 59               | 18                                           | 30   |
| XXVIII                  |        | ac nota.     | 60                        | 40               | 18                                           | 45   |
| XXIX                    | 27     | sed possu-   | 61                        | 18               | 19                                           | 0    |
| XXX                     |        | muscli:      | 61                        | 53               | 19                                           | 15   |
| XXXI                    | 28     | mata de-     | 62                        | 25               | 19                                           | 30   |
| XXXII                   |        | inceps       | 62                        | 55               | 19                                           | 45   |
| XXXIII                  | 29     | numera-      | 63                        | 22               | 20                                           | 0    |
| XXXIII                  |        | re simi-     | 63                        | 47               | 20                                           | 15   |
| XXXV                    |        | li rati-     | 64                        | 10               | 20                                           | 30   |
| XXXVI                   |        | one          | 64                        | 31               | 20                                           | 45   |
| XXXVII                  | 30     |              | 64                        | 49               | 21                                           | 0    |
| XXXVIII                 |        |              | 65                        | 6                | 21                                           | 15   |
| XXXIX                   |        |              | 65                        | 22               | 21                                           | 30   |
| XL                      |        |              | 65                        | 35               | 21                                           | 45   |
| XLI                     | 31     |              | 65                        | 47               | 22                                           | 0    |
| XLII                    |        |              | 65                        | 58               | 22                                           | 15   |
| XLIII                   |        |              | 66                        | 7                | 22                                           | 30   |
| XLIII                   |        |              | 66                        | 15               | 22                                           | 45   |
| XLV                     | 32     |              | 66                        | 21               | 23                                           | 0    |
| XLVI                    |        |              | 66                        | 25               | 23                                           | 15   |
| XLVII                   |        |              | 66                        | 29               | 23                                           | 30   |
| XLVIII                  |        |              | 66                        | 31               | 23                                           | 45   |
| XLIX                    | 33     |              | 66                        | 31 $\frac{1}{2}$ | 24                                           | 0    |

Ium. Nam quadragesimus nonus est primus Periclorum.



## TABVLAE Præcedentis.

| Paraleli<br>prio |  | V M E R A R V M R A T I O N E S<br>qualium gnomoneſt 60. |      |          |      |           |      | L O C A B O R E A L I A, per quæ<br>ſcribuntur paralleli. |  |
|------------------|--|----------------------------------------------------------|------|----------|------|-----------|------|-----------------------------------------------------------|--|
| res              |  | par.                                                     | ſcr. | par.     | ſcr. | partes    | ſcr. |                                                           |  |
| 25               |  | 41                                                       | 58   | 97       | 41   | 422       | 30   | Per Bohuscaſtrum Noruegiæ.                                |  |
| 26               |  | 43                                                       | 12   | 100      | 40   | 469       | 44   | Per Rigam Liuoſiæ.                                        |  |
| 27               |  | 44                                                       | 25   | 103      | 52   | 523       | 33   | Per Gothiam                                               |  |
| 28               |  | 45                                                       | 32   | 106      | 48   | 585       | 16   | Per Stockolmiam Sueciæ regiam                             |  |
| 29               |  | 46                                                       | 37   | 109      | 36   | 656       | 0    | Per Bergis Noruegiæ                                       |  |
| 30               |  | 47                                                       | 34   | 112      | 13   | 739       | 0    | Per Vplaliã Sueciæ et Reualiã Li-                         |  |
| 31               |  | 48                                                       | 29   | 114      | 53   | 836       | 0    | Per Viburgũ Finlandiæ. (uoniæ.                            |  |
| 32               |  | 49                                                       | 21   | 117      | 19   | 950       | 0    | Per Orchades & australia Islandiæ                         |  |
| 33               |  | 50                                                       | 9    | 119      | 38   | 1088      | 0    | Per Arociã Sueciæ.                                        |  |
| 34               |  | 50                                                       | 53   | 121      | 50   | 1252      | 0    | Per Nidroſiam.                                            |  |
| 35               |  | 51                                                       | 35   | 123      | 54   | 1454      | 0    | Per Dalekarlñ fluuij oſtia.                               |  |
| 36               |  | 52                                                       | 13   | 125      | 50   | 1704      | 0    |                                                           |  |
| 37               |  | 52                                                       | 48   | 127      | 38   | 2019      | 0    | PER RELIQUA                                               |  |
| 38               |  | 53                                                       | 20   | 129      | 18   | 2424      | 0    | LOCA NOR-                                                 |  |
| 39               |  | 53                                                       | 49   | 130      | 49   | 2956      | 0    | VEGIAE                                                    |  |
| 40               |  | 54                                                       | 14   | 132      | 12   | 3674      | 0    | ET                                                        |  |
| 41               |  | 54                                                       | 37   | 133      | 26   | 4680      | 0    | SVECIAE                                                   |  |
| 42               |  | 54                                                       | 57   | 134      | 32   | 6148      | 0    | REGNORVM                                                  |  |
| 43               |  | 55                                                       | 15   | 135      | 30   | 8413      | 0    | ET VICIS                                                  |  |
| 44               |  | 55                                                       | 30   | 136      | 18   | 12157     | 0    | NARVM                                                     |  |
| 45               |  | 55                                                       | 42   | 136      | 58   | 19040     | 0    | INSV-                                                     |  |
| 46               |  | 55                                                       | 51   | 137      | 29   | 31814     | 0    | LARVM                                                     |  |
| 47               |  | 55                                                       | 57   | 137      | 51   | 76384     | 0    | ET ALBAE                                                  |  |
| 48               |  | 56                                                       | 1    | 138      | 5    | 101650    | 0    | RVSSIAE                                                   |  |
| 49               |  |                                                          |      |          |      |           |      | Subcirculo Arctico                                        |  |
| 4                |  | 56                                                       | 2    | 138      | 9    | Infinitum |      |                                                           |  |
|                  |  | Solſtitia-                                               |      | Aequino- |      | Bruma-    |      |                                                           |  |
|                  |  | lis,                                                     |      | ctialis, |      | lis.      |      |                                                           |  |



POSTERIOR PARS TABULAE, IN QUA PAR-  
 tibus graduum meridiani circuli complectens eas regiones, quae sunt intra circ-

OMNES PERISCI

| Numerus Paral-<br>lelorum. |          | Latitudo<br>regionis. |      | Arcus semper adpa-<br>rens uel occultatus. |      |
|----------------------------|----------|-----------------------|------|--------------------------------------------|------|
| prior.                     | Ptolemæ. | g                     | scr. | g                                          | scr. |
| L.                         |          | 67                    | 0    | 22                                         | 27   |
| LI.                        | 34       | 67                    | 30   | 32                                         | 15   |
| LII.                       |          | 68                    | 0    | 39                                         | 46   |
| LIII.                      |          | 68                    | 30   | 46                                         | 8    |
| LIIII.                     |          | 69                    | 0    | 51                                         | 47   |
| LV.                        |          | 69                    | 30   | 56                                         | 55   |
| LVI.                       | 35       | 70                    | 0    | 61                                         | 41   |
| LVII.                      |          | 70                    | 30   | 66                                         | 9    |
| LVIII.                     |          | 71                    | 0    | 70                                         | 22   |
| LIX.                       |          | 71                    | 30   | 74                                         | 24   |
| LX.                        |          | 72                    | 0    | 78                                         | 15   |
| LXI.                       |          | 72                    | 30   | 81                                         | 58   |
| LXII.                      |          | 73                    | 0    | 85                                         | 34   |
| LXIII.                     | 36       | 73                    | 30   | 89                                         | 3    |
| LXIIII.                    |          | 74                    | 0    | 92                                         | 26   |
| LXV.                       |          | 74                    | 30   | 95                                         | 44   |
| LXVI.                      |          | 75                    | 0    | 98                                         | 57   |
| LXVII.                     |          | 75                    | 30   | 102                                        | 7    |
| LXVIII.                    |          | 76                    | 0    | 105                                        | 13   |
| LXIX.                      |          | 76                    | 30   | 108                                        | 15   |
| LXX.                       |          | 77                    | 0    | 111                                        | 14   |
| LXXI.                      |          | 77                    | 30   | 114                                        | 11   |
| LXXII.                     |          | 78                    | 0    | 117                                        | 5    |
| LXXIII.                    | 37       | 78                    | 30   | 119                                        | 56   |



SEQVITVR CA=  
NON VMBRARVM MERIDI.  
anarum per singulos gradus latitudinis,  
recens ab eodem autore  
computatus.



# CANON VMBRARVM MERIDIANARVM ad singulos

| Gradus<br>Latitudinis. | Qualium gnomon. 10000000 |                     |                   | Qualium gnomon. 60 |      |                      |      |                |      |
|------------------------|--------------------------|---------------------|-------------------|--------------------|------|----------------------|------|----------------|------|
|                        | Solstitia-<br>lis.       | Aequino-<br>ctialis | Brumalis<br>Vmbra | Solstitia-<br>lis. |      | Aequino-<br>ctialis. |      | Bruma-<br>lis. |      |
|                        |                          |                     |                   | par.               | scr. | par.                 | scr. | partes         | scr. |
| 1                      | 4137029                  | 174550              | 4552001           | 24                 | 49   | 1                    | 3    | 27             | 18   |
| 2                      | 3934069                  | 349207              | 4764410           | 23                 | 36   | 2                    | 5    | 28             | 35   |
| 3                      | 3733880                  | 524078              | 4980376           | 22                 | 24   | 3                    | 8    | 29             | 53   |
| 4                      | 3536280                  | 699268              | 5200133           | 21                 | 13   | 4                    | 11   | 31             | 12   |
| 5                      | 3341106                  | 874886              | 5423916           | 20                 | 3    | 5                    | 15   | 32             | 32   |
| 6                      | 3148196                  | 1051042             | 5651974           | 18                 | 53   | 6                    | 18   | 33             | 54   |
| 7                      | 2957393                  | 1227845             | 5884583           | 17                 | 44   | 7                    | 22   | 35             | 18   |
| 8                      | 2768550                  | 1405408             | 6122017           | 16                 | 36   | 8                    | 26   | 36             | 44   |
| 9                      | 2581524                  | 1583844             | 6364579           | 15                 | 29   | 9                    | 30   | 38             | 11   |
| 10                     | 2396176                  | 1763269             | 6612592           | 14                 | 22   | 10                   | 34   | 39             | 40   |
| 11                     | 2212371                  | 1943803             | 6866398           | 13                 | 16   | 11                   | 39   | 41             | 12   |
| 12                     | 2029981                  | 2125565             | 7126361           | 12                 | 10   | 12                   | 45   | 42             | 45   |
| 13                     | 1848880                  | 2308682             | 7392872           | 11                 | 5    | 13                   | 51   | 44             | 21   |
| 14                     | 1668942                  | 2493280             | 7666353           | 10                 | 0    | 14                   | 57   | 46             | 0    |
| 15                     | 1490052                  | 2679492             | 7947250           | 8                  | 56   | 16                   | 4    | 47             | 41   |
| 16                     | 1312088                  | 2867453             | 8236052           | 7                  | 52   | 17                   | 12   | 49             | 24   |
| 17                     | 1134937                  | 3057307             | 8533278           | 6                  | 48   | 18                   | 20   | 51             | 11   |
| 18                     | 958487                   | 3249197             | 8839494           | 5                  | 45   | 19                   | 29   | 53             | 2    |
| 19                     | 782628                   | 3443276             | 9155306           | 4                  | 42   | 20                   | 39   | 54             | 56   |
| 20                     | 607246                   | 3639702             | 9481375           | 3                  | 38   | 21                   | 50   | 56             | 53   |
| 21                     | 432238                   | 3838640             | 9818421           | 2                  | 35   | 23                   | 2    | 58             | 54   |
| 22                     | 257403                   | 4040262             | 10167213          | 1                  | 32   | 24                   | 14   | 61             | 0    |
| 23                     | 82904                    | 4244748             | 10528620          | 0                  | 29   | 25                   | 28   | 63             | 10   |
| 24                     | 91632                    | 4452286             | 10903569          | 0                  | 33   | 26                   | 43   | 65             | 25   |
| 25                     | 266226                   | 4663081             | 11293039          | 1                  | 36   | 27                   | 58   | 67             | 45   |
| 26                     | 440981                   | 4877328             | 11698187          | 2                  | 38   | 29                   | 15   | 70             | 11   |
| 27                     | 616005                   | 5095254             | 12120243          | 3                  | 41   | 30                   | 34   | 72             | 43   |
| 28                     | 791408                   | 5317094             | 12560506          | 4                  | 44   | 31                   | 54   | 75             | 21   |
| 29                     | 967295                   | 5543090             | 13020523          | 5                  | 48   | 33                   | 15   | 78             | 7    |
| 30                     | 1143777                  | 5773502             | 13501940          | 6                  | 52   | 34                   | 38   | 81             | 0    |



## GRADVS LATITVDINIS.

| Gradus<br>Latitudinis. | Qualiumgnomon      |                      | 10000000 | Qualiumgnomon 60.  |                    |                      |                    |      |       |
|------------------------|--------------------|----------------------|----------|--------------------|--------------------|----------------------|--------------------|------|-------|
|                        | Solstitia-<br>lis. | AEquinoc-<br>tialis. |          | Brumalis<br>Vmbra. | Solsti-<br>tialis. | Aequino-<br>ctialis. | Brumalis<br>Vmbra. |      |       |
|                        |                    |                      |          |                    | pa.                | scr.                 | par.               | scr. | part. |
| 31                     | 1320966            | 6008606              | 14006594 | 7 56               | 36                 | 3                    | 84                 | 2    |       |
| 32                     | 1498973            | 6248693              | 14536547 | 9 0                | 37                 | 29                   | 87                 | 13   |       |
| 33                     | 1677914            | 6494076              | 15094091 | 10 4               | 38                 | 57                   | 90                 | 34   |       |
| 34                     | 1837906            | 6745085              | 15681811 | 11 8               | 40                 | 28                   | 94                 | 5    |       |
| 35                     | 2039069            | 7002075              | 16302609 | 12 14              | 42                 | 1                    | 97                 | 49   |       |
| 36                     | 2221527            | 7265424              | 16959775 | 13 19              | 43                 | 35                   | 101                | 45   |       |
| 37                     | 2405406            | 7535541              | 17657040 | 14 25              | 45                 | 12                   | 105                | 56   |       |
| 38                     | 2590835            | 7812856              | 18398645 | 15 32              | 46                 | 52                   | 110                | 23   |       |
| 39                     | 2777948            | 8097840              | 19185470 | 16 40              | 48                 | 35                   | 115                | 8    |       |
| 40                     | 2966885            | 8390996              | 20035109 | 17 48              | 50                 | 20                   | 120                | 11   |       |
| 41                     | 3157790            | 8692867              | 20942036 | 18 57              | 52                 | 9                    | 125                | 39   |       |
| 42                     | 3350810            | 9004040              | 21917788 | 20 6               | 54                 | 1                    | 131                | 30   |       |
| 43                     | 3546101            | 9325151              | 22971165 | 21 16              | 55                 | 57                   | 137                | 49   |       |
| 44                     | 3743827            | 9656888              | 24112551 | 22 27              | 57                 | 56                   | 144                | 40   |       |
| 45                     | 3944150            | 10000000             | 25354236 | 23 39              | 60                 | 0                    | 152                | 7    |       |
| 46                     | 4147253            | 10355302             | 26710906 | 24 53              | 62                 | 8                    | 160                | 16   |       |
| 47                     | 4353319            | 10723686             | 28200286 | 26 7               | 64                 | 20                   | 169                | 12   |       |
| 48                     | 4562541            | 11106124             | 29843882 | 27 22              | 66                 | 38                   | 179                | 4    |       |
| 49                     | 4775122            | 11503684             | 31668123 | 28 39              | 69                 | 1                    | 190                | 0    |       |
| 50                     | 4991272            | 11917537             | 33705870 | 29 56              | 71                 | 30                   | 202                | 14   |       |
| 51                     | 5211224            | 12348972             | 35998381 | 31 15              | 74                 | 5                    | 216                | 0    |       |
| 52                     | 5435216            | 12799416             | 38598302 | 32 37              | 76                 | 48                   | 231                | 35   |       |
| 53                     | 5663495            | 13270448             | 41573884 | 33 59              | 79                 | 37                   | 249                | 26   |       |
| 54                     | 5896337            | 13763820             | 45015100 | 35 23              | 82                 | 34                   | 270                | 5    |       |
| 55                     | 6134021            | 14281480             | 49043348 | 36 48              | 85                 | 41                   | 294                | 15   |       |
| 56                     | 6376848            | 14825610             | 53825780 | 38 15              | 88                 | 57                   | 322                | 57   |       |
| 57                     | 6625142            | 15398651             | 59598204 | 39 45              | 92                 | 23                   | 357                | 35   |       |
| 58                     | 6879246            | 16003347             | 66712446 | 41 16              | 96                 | 1                    | 400                | 16   |       |
| 59                     | 7139528            | 16642794             | 75702267 | 42 50              | 99                 | 51                   | 454                | 12   |       |
| 60                     | 7406377            | 17320503             | 87429703 | 44 26              | 103                | 54                   | 524                | 34   |       |



# Reliquum antecedentis Canonis umbrarum

| Gradus<br>Latitudinis. | Qualium gnomon   |                 | 10000000  |                  | Qualium gnomon 60. |                |           |           |            |            |
|------------------------|------------------|-----------------|-----------|------------------|--------------------|----------------|-----------|-----------|------------|------------|
|                        | Solstitialis.    | AEquinoctialis. | Brumalis. |                  | Solstitialis.      | Æquinoctialis. |           | Brumalis. |            |            |
|                        |                  |                 |           |                  |                    | pa.            | scr.      | par.      | scr.       | part. scr. |
| 61                     | 0                | 7680218         | 18040478  | 103380997        | 46                 | 5              | 108       | 14        | 620        | 17         |
| 62                     |                  | 7961499         | 18807265  | 126357140        | 47                 | 46             | 112       | 50        | 758        | 8          |
| 63                     |                  | 8250709         | 19626104  | 162335970        | 49                 | 30             | 117       | 45        | 974        | 1          |
| 64                     |                  | 8548371         | 20503034  | 226767063        | 51                 | 17             | 123       | 0         | 1360       | 36         |
| 65                     |                  | 8855052         | 21445067  | 375621668        | 53                 | 8              | 128       | 39        | 2253       | 44         |
| 66                     | 0                | 9171360         | 22460371  | 1091323504       | 55                 | 1              | 134       | 45        | 6547       | 56         |
| 66                     | 31 $\frac{1}{2}$ | 9341510         | 23026050  | Infinitum.       | 56                 | 3              | 138       | 9         | Infinitum. |            |
| 67                     | 0                | 9497961         | 23558529  | Quia sol conuer- | 56                 | 59             | 141       | 21        |            |            |
| 68                     |                  | 9835574         | 24750869  | titur per totam  | 59                 | 1              | 148       | 30        |            |            |
| 69                     |                  | 10184976        | 26050893  | plani horizon-   | 61                 | 6              | 156       | 18        |            |            |
| 70                     |                  | 10547038        | 27474777  |                  | 63                 | 17             | 164       | 50        |            |            |
| 71                     |                  | 10922674        | 29042105  | talís circum-    | 65                 | 32             | 174       | 15        |            |            |
| 72                     |                  | 11312915        | 30776834  |                  | 67                 | 52             | 184       | 39        |            |            |
| 73                     |                  | 11718877        | 32708528  | ferentiam.       | 70                 | 18             | 196       | 15        |            |            |
| 74                     |                  | 12141792        | 34874151  |                  | 72                 | 51             | 209       | 14        |            |            |
| 75                     |                  | 12583024        | 37320513  |                  | 75                 | 29             | 223       | 55        |            |            |
| 76                     |                  | 13044072        | 40107807  |                  | 78                 | 15             | 240       | 38        |            |            |
| 77                     |                  | 13526605        | 43314747  |                  | 81                 | 9              | 259       | 53        |            |            |
| 78                     |                  | 14032473        | 47046298  |                  | 84                 | 11             | 282       | 16        |            |            |
| 79                     |                  | 14563749        | 51445539  |                  | 87                 | 23             | 308       | 40        |            |            |
| 80                     |                  | 15122737        | 56712813  |                  | 90                 | 44             | 340       | 16        |            |            |
| 81                     |                  | 15712040        | 63137498  |                  | 94                 | 16             | 378       | 49        |            |            |
| 82                     |                  | 16334575        | 71153699  |                  | 98                 | 0              | 426       | 55        |            |            |
| 83                     |                  | 16993654        | 81443489  |                  | 101                | 58             | 488       | 39        |            |            |
| 84                     |                  | 17693029        | 95143611  |                  | 106                | 9              | 570       | 51        |            |            |
| 85                     |                  | 18436975        | 114300579 |                  | 110                | 37             | 685       | 48        |            |            |
| 86                     |                  | 19230401        | 143006601 |                  | 115                | 23             | 858       | 2         |            |            |
| 87                     |                  | 20078942        | 150811200 |                  | 120                | 28             | 1144      | 52        |            |            |
| 88                     |                  | 20989123        | 286362498 |                  | 125                | 56             | 1718      | 10        |            |            |
| 89                     |                  | 21968534        | 572899830 |                  | 131                | 48             | 3437      | 24        |            |            |
| 90                     | 0                | 23026050        | Infinitum |                  | 138                | 9              | Infinitum |           |            |            |



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**PARALLELI INVICEM DISIUNGUNTUR SEMIS-**  
*culum arcticum uel antarcticum circumquaq; h, e, ambas frigidas zonas.*

| paral-<br>leli |     | Continua<br>lux in æsta- |     | Continua<br>nox in hy- |     | LOCA BOREALIA, per quæ<br>scribuntur paralleli.     |
|----------------|-----|--------------------------|-----|------------------------|-----|-----------------------------------------------------|
| prior-<br>res. | te. | Dies                     | Ho. | eme.<br>Dies           | Ho. |                                                     |
| 50             | 23  | 11                       | 22  | 1                      |     | Per Rollen, Noruegiæ & Laganam Insulam.             |
| 51             | 33  | 17                       | 31  | 13                     |     | Per Varstal Insulam & Ouick lacū Noruegiæ.          |
| 52             | 41  | 14                       | 39  | 2                      |     | Per Holē Episcopālē Islādię, & domū regiā in Finlā. |
| 53             | 48  | 6                        | 45  | 8                      |     | Per Andanam Insulā Nor. & Corsholm Bothniæ.         |
| 54             | 54  | 3                        | 50  | 22                     |     | Per Insulā Sauyam Nor. & Chymenen emporiū           |
| 55             | 59  | 12                       | 56  | 0                      |     | Per Helganam Noruegiæ. (Bothniæ.                    |
| 56             | 64  | 11                       | 60  | 16                     |     | Per Rodesholm Noruegiæ. (Insulam.                   |
| 57             | 69  | 4                        | 65  | 2                      |     | Per Vuardehus Noruegiæ extremum, & Trunis           |
| 58             | 73  | 13                       | 69  | 6                      |     | Per Hielso Insulam Noruegiæ.                        |
| 59             | 77  | 17                       | 73  | 5                      |     |                                                     |
| 60             | 81  | 17                       | 77  | 1                      |     | PER L A <sup>s</sup>                                |
| 61             | 85  | 14                       | 80  | 17                     |     |                                                     |
| 62             | 89  | 8                        | 84  | 6                      |     | P O N I A M                                         |
| 63             | 92  | 22                       | 87  | 18                     |     | E T                                                 |
| 64             | 96  | 10                       | 91  | 2                      |     | V I R I <sup>s</sup>                                |
| 65             | 99  | 21                       | 94  | 9                      |     |                                                     |
| 66             | 103 | 5                        | 97  | 14                     |     | D E M                                               |
| 67             | 106 | 11                       | 100 | 17                     |     |                                                     |
| 68             | 109 | 16                       | 103 | 19                     |     | T E R <sup>s</sup>                                  |
| 69             | 112 | 20                       | 106 | 20                     |     |                                                     |
| 70             | 115 | 22                       | 109 | 20                     |     | R A M, quam                                         |
| 71             | 118 | 22                       | 112 | 17                     |     |                                                     |
| 72             | 121 | 22                       | 115 | 14                     |     | multi sentiunt                                      |
| 73             | 124 | 21                       | 118 | 11                     |     |                                                     |



# RELIQVVM POSTERIORIS

| O<br>M<br>N<br>E<br>S<br>P<br>E<br>R<br>I<br>S<br>C<br>I | NVMERVS<br>Parallelorum      |        | LATITV=do regionis |      | Arcus semper adpa=rensuel occultatus. |      |
|----------------------------------------------------------|------------------------------|--------|--------------------|------|---------------------------------------|------|
|                                                          | PRIOR                        | Ptole. | Gra.               | scr. | Gra.                                  | scr. |
|                                                          | LXXIIII                      |        | 79                 | 0    | 122                                   | 46   |
|                                                          | LXXV                         |        | 79                 | 30   | 125                                   | 33   |
|                                                          | LXXVI                        |        | 80                 | 0    | 128                                   | 19   |
|                                                          | LXXVII                       |        | 80                 | 30   | 131                                   | 3    |
|                                                          | LXXVIII                      |        | 81                 | 0    | 133                                   | 45   |
|                                                          | LXXIX                        |        | 81                 | 30   | 136                                   | 26   |
|                                                          | LXXX                         |        | 82                 | 0    | 139                                   | 6    |
|                                                          | LXXXI                        |        | 82                 | 30   | 141                                   | 45   |
|                                                          | LXXXII                       |        | 83                 | 0    | 144                                   | 22   |
|                                                          | LXXXIII                      |        | 83                 | 30   | 146                                   | 59   |
|                                                          | LXXXIIII                     | 38     | 84                 | 0    | 149                                   | 34   |
|                                                          | LXXXV                        |        | 84                 | 30   | 152                                   | 9    |
|                                                          | LXXXVI                       |        | 85                 | 0    | 154                                   | 43   |
|                                                          | LXXXVII                      |        | 85                 | 30   | 157                                   | 17   |
|                                                          | LXXXVIII                     |        | 86                 | 0    | 159                                   | 50   |
|                                                          | LXXXIX                       |        | 86                 | 30   | 162                                   | 22   |
|                                                          | XC                           |        | 87                 | 0    | 164                                   | 54   |
|                                                          | XCI                          |        | 87                 | 30   | 167                                   | 26   |
|                                                          | XCII                         |        | 88                 | 0    | 169                                   | 57   |
|                                                          | XCIII                        |        | 88                 | 30   | 172                                   | 28   |
|                                                          | XCIIII                       |        | 89                 | 0    | 174                                   | 59   |
|                                                          | XCV                          |        | 89                 | 30   | 177                                   | 29   |
|                                                          | XCVI ultimus<br>situs mundi. |        | 90                 | 0    | 180                                   | 0    |



## PARTIS TABVLAE.

| paral<br>leli<br>prior<br>res. | Continua<br>lux in æsta- |     | Continua<br>nox in hy- |     | LOCA BOREALIA, per quæ<br>scribuntur paralleli.                                                                                         |
|--------------------------------|--------------------------|-----|------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------|
|                                | te.<br>Dies              | Ho. | eme.<br>Dies           | Ho. |                                                                                                                                         |
| 74                             | 127                      | 19  | 121                    | 7   | tractu cons                                                                                                                             |
| 75                             | 130                      | 17  | 124                    | 2   |                                                                                                                                         |
| 76                             | 133                      | 13  | 126                    | 20  | tinuo cum                                                                                                                               |
| 77                             | 136                      | 8   | 129                    | 14  |                                                                                                                                         |
| 78                             | 139                      | 3   | 132                    | 7   | India occiden                                                                                                                           |
| 79                             | 141                      | 21  | 135                    | 0   |                                                                                                                                         |
| 80                             | 144                      | 14  | 137                    | 17  | tali cohæ                                                                                                                               |
| 81                             | 147                      | 7   | 140                    | 9   |                                                                                                                                         |
| 82                             | 150                      | 0   | 142                    | 23  | rere.                                                                                                                                   |
| 83                             | 152                      | 16  | 145                    | 13  |                                                                                                                                         |
| 84                             | 155                      | 8   | 148                    | 4   |                                                                                                                                         |
| 85                             | 158                      | 0   | 150                    | 18  |                                                                                                                                         |
| 86                             | 160                      | 15  | 153                    | 9   | Cæterum de his septentrionalibus locis nihil<br>possumus, quod ad parallelos adtinet, certo<br>adfirmare. Volumus tamen hac nostra ope  |
| 87                             | 163                      | 5   | 155                    | 22  |                                                                                                                                         |
| 88                             | 165                      | 19  | 158                    | 12  | ra simul etiam doctis inferuire, qui uel<br>iam in istis locis degunt, uel aliquando eò<br>peruenturi sunt, siquidem absq; instrumentis |
| 89                             | 168                      | 9   | 161                    | 2   |                                                                                                                                         |
| 90                             | 170                      | 23  | 163                    | 15  | tantum ex perpetua luce uel nocte facillime<br>iudicari potest altitudo poli, ut in priorì<br>tabula ex longissima die uel nocte.       |
| 91                             | 173                      | 13  | 166                    | 4   |                                                                                                                                         |
| 92                             | 176                      | 2   | 168                    | 16  |                                                                                                                                         |
| 93                             | 178                      | 16  | 171                    | 6   |                                                                                                                                         |
| 94                             | 181                      | 5   | 173                    | 19  |                                                                                                                                         |
| 95                             | 183                      | 19  | 176                    | 9   |                                                                                                                                         |
| 96                             | 186                      | 7   | 178                    | 22  |                                                                                                                                         |



Haecenus descripsimus ordine parallelas in quadrante Boreali, qui ab æquinoctiali usque ad nostrum  
 polum arcticum deducitur. Etsi autem tota illa australis mundi regio parum adhuc explorata est, et si  
 cut navigationes ostendunt, magna ex parte aquis tegitur, tamen astronomica ratio postulat totidem  
 parallelas in ea quoque regione collocari. His igitur cum propria desint nomina, antæcorum, hoc est, no-  
 strorum locorum appellationes adaptabimus, Vt quintum uersus austrum parallelum uocabimus antæ-  
 cum parallelum, qui transit per insulam Meroën, ac eodem modo reliquos reliquis antæcos suo ordine. Vo-  
 cantur autem Perioeci habitantes sub eodem parallelum et meridiano, nempe in locis oppositis eiusdem pa-  
 ralleli, quibus idem polus eodem modo attollitur, ac iisdem temporibus anni simul fruuntur. Antæci au-  
 tem et antipodes dicuntur, quicunque sub eodem meridiano et similibus parallelis habitant, atque diuersis  
 anni temporibus simul fruuntur, sed dissimili ratione. Antipodes enim in locis prorsus ex diametro op-  
 positis degunt, Antæci uero inter utrumque polum ex eadem mundi parte uersantur. Præterea Antæcis  
 simul omnibus eodem momento temporis fit meridies, At tam Perioeci quam Antichthones diurna ac no-  
 cturna tempora inuicem commutant.

Longa quidem latæ descripsit climata terræ  
 Arbitr ingenij prisce Marinæ tui,  
 At loca, qua mundus dextrum consurgit in axem  
 Sicca sub extremo quæ uidet ursa polo,  
 Longius à summo quæ distat uertice tellus,  
 Et boreas Solis fortius adflat equos.  
 Vel quia non nouit, seu quod non digna putauit,  
 Ingenio curæ non tulit esse suo.  
 Nunc quoniam huc posuit migrans Ecclesia sedem,  
 Longior hybernas qua tegit umbra plagas.  
 En aliter radio terras definit ERASMVVS,  
 Hasque recens tabulas edidit autor opus,  
 Quæ monstrant, rectas spaciū quod separet urbes  
 Quanta sit ad summum, quæ uia tota polum.  
 Quæ ratio nimbrium longas abrumperet luces.  
 Climate diuerso sæpe notata, queat

Vt nunc in Libien, ut nunc declinet in Arcton,  
 Dum subit alterna Sol sua puncta uice.  
 Vtque supra terram, Boreæ cum proximus idem est  
 Continua totis luce diebus eat,  
 Longius aut refugus propius cum uergit ad austrum,  
 Continuis Arcton noctibus umbra tegat.  
 Quando uel æstiuæ feruentia bracchia Cancræ,  
 Vel premit hybernæ frigida terga Capræ.  
 Qui negat hinc fructum ciuili accedere uite,  
 Hinc procul in Gyris uiuere dignus erat.  
 Disce bonas artes, per quas Ecclesia crescit,  
 Dum datur: ingenio disce iuuenta frui.  
 Quem iuuat ignauo semper torpescere luxu,  
 Huic sedet à tergo poena parata comes.

IOANNES STIGELIVS.

Sequitur



SEQVITVR CA=  
NON VMBRARVM AD SIN=  
gulos gradus altitudinis ☉ ex proximo cano=  
ne desumptus, ut facile  
adparet.

LI



CANON VMBRARVM ad singulos gradus altitudinis ☉.

| Altitudo<br>☉ | Qualium gnomon. |      |      | Altitudo<br>☉ | Qualium gnomon. |      |      | Altitudo<br>☉ | Qualium gnomon. |      |      |
|---------------|-----------------|------|------|---------------|-----------------|------|------|---------------|-----------------|------|------|
|               | 100000000       | 60   |      |               | 100000000       | 60   |      |               | 100000000       | 60   |      |
|               |                 | par. | scr. |               |                 | par. | scr. |               |                 | par. | scr. |
| 0             | Infinicum       |      |      | 30            | 17320508        | 103  | 54   | 60            | 5773502         | 34   | 38   |
| 1             | 572899830       | 3437 | 24   | 31            | 16642794        | 99   | 51   | 61            | 5543090         | 33   | 15   |
| 2             | 286362498       | 1718 | 10   | 32            | 16003347        | 96   | 1    | 62            | 5317094         | 31   | 54   |
| 3             | 190811200       | 1144 | 52   | 33            | 15398651        | 92   | 23   | 63            | 5095254         | 30   | 34   |
| 4             | 143006601       | 858  | 2    | 34            | 14825610        | 88   | 57   | 64            | 4877328         | 29   | 15   |
| 5             | 114300579       | 685  | 48   | 35            | 14281480        | 85   | 41   | 65            | 4653081         | 27   | 58   |
| 6             | 95143611        | 570  | 51   | 36            | 13763820        | 82   | 34   | 66            | 4452286         | 26   | 43   |
| 7             | 81443489        | 488  | 39   | 37            | 13270448        | 79   | 37   | 67            | 4244748         | 25   | 28   |
| 8             | 71153699        | 426  | 55   | 38            | 12799416        | 76   | 48   | 68            | 4040262         | 24   | 14   |
| 9             | 63137498        | 378  | 49   | 39            | 12348972        | 74   | 5    | 69            | 3838640         | 23   | 2    |
| 10            | 56712813        | 340  | 16   | 40            | 11917537        | 71   | 30   | 70            | 3639701         | 21   | 50   |
| 11            | 51445539        | 308  | 40   | 41            | 11503684        | 69   | 1    | 71            | 3443276         | 20   | 39   |
| 12            | 47046298        | 282  | 16   | 42            | 11106124        | 66   | 38   | 72            | 3249197         | 19   | 29   |
| 13            | 43314747        | 259  | 53   | 43            | 10723686        | 64   | 20   | 73            | 3057307         | 18   | 20   |
| 14            | 40107807        | 240  | 38   | 44            | 10355302        | 62   | 8    | 74            | 2867453         | 17   | 12   |
| 15            | 37320513        | 223  | 55   | 45            | 100000000       | 60   | 0    | 75            | 2679492         | 16   | 4    |
| 16            | 34874151        | 209  | 14   | 46            | 9656888         | 57   | 56   | 76            | 2493280         | 14   | 57   |
| 17            | 32708528        | 196  | 15   | 47            | 9325151         | 55   | 57   | 77            | 2308682         | 13   | 51   |
| 18            | 30776834        | 184  | 39   | 48            | 9004040         | 54   | 1    | 78            | 2125565         | 12   | 45   |
| 19            | 29042105        | 174  | 15   | 49            | 8692867         | 52   | 9    | 79            | 1943803         | 11   | 39   |
| 20            | 27474777        | 164  | 50   | 50            | 8390996         | 50   | 20   | 80            | 1763269         | 10   | 34   |
| 21            | 26050893        | 156  | 18   | 51            | 8097840         | 48   | 35   | 81            | 1583844         | 9    | 30   |
| 22            | 24750869        | 148  | 30   | 52            | 7812856         | 46   | 52   | 82            | 1405408         | 8    | 26   |
| 23            | 23558529        | 141  | 21   | 53            | 7535541         | 45   | 12   | 83            | 1227845         | 7    | 22   |
| 24            | 22460371        | 134  | 45   | 54            | 7265424         | 43   | 35   | 84            | 1051042         | 6    | 18   |
| 25            | 21445067        | 128  | 39   | 55            | 7002075         | 42   | 1    | 85            | 874886          | 5    | 15   |
| 26            | 20503034        | 123  | 0    | 56            | 6745089         | 40   | 28   | 86            | 699268          | 4    | 11   |
| 27            | 19626104        | 117  | 45   | 57            | 6494076         | 38   | 57   | 87            | 524078          | 3    | 8    |
| 28            | 18807265        | 112  | 50   | 58            | 6248693         | 37   | 29   | 88            | 349207          | 2    | 5    |
| 29            | 18040478        | 108  | 14   | 59            | 6008606         | 36   | 3    | 89            | 174550          | 1    | 3    |
| 30            | 17320508        | 103  | 54   | 60            | 5773502         | 34   | 38   | 90            | 00000           |      |      |



Quisquis ades tabulam spectans, pie lector, & artem,  
 Quæ tibi præsentî conspicienda datur,  
 Accipe qua debes doctissima munera mente  
 REINHOLDI studijs ingenioq; faue.  
 Hic tibi quæ gelido loca sint habitata sub axe  
 Monstrat, ubi seu frigore cuncta rigent,  
 Ignotumq; diu certis rationibus orbem  
 Describens, docta diuidit arte plagas.  
 Addit inæqualis quæ constet causa diei,  
 Mutet ut obliquum tempora Solis iter,  
 Utq; Lycaoniam semper spectantibus Arcton  
 Sæpe dies multis mensibus unus eat.  
 Scilicet æstiuo cum flagrant brachia Cancrî  
 Sole, premit siccos cum canis ortus agros. a  
 Hæc tibi sit lector cognoscere uera uoluptas,  
 Conueniet studijs hæc quoq; cura tuis.  
 Vera creatricis sunt hæc uestigia mentis,  
 Quæ uoluit certis legibus astra regi.  
 Has iubet amplecti, qui tales excitat artes,  
 Quiq; pijs studijs gaudet amatq; coli.  
 Sebastianus Glaser.

L I 2

















Nr. 388

Ausgang :

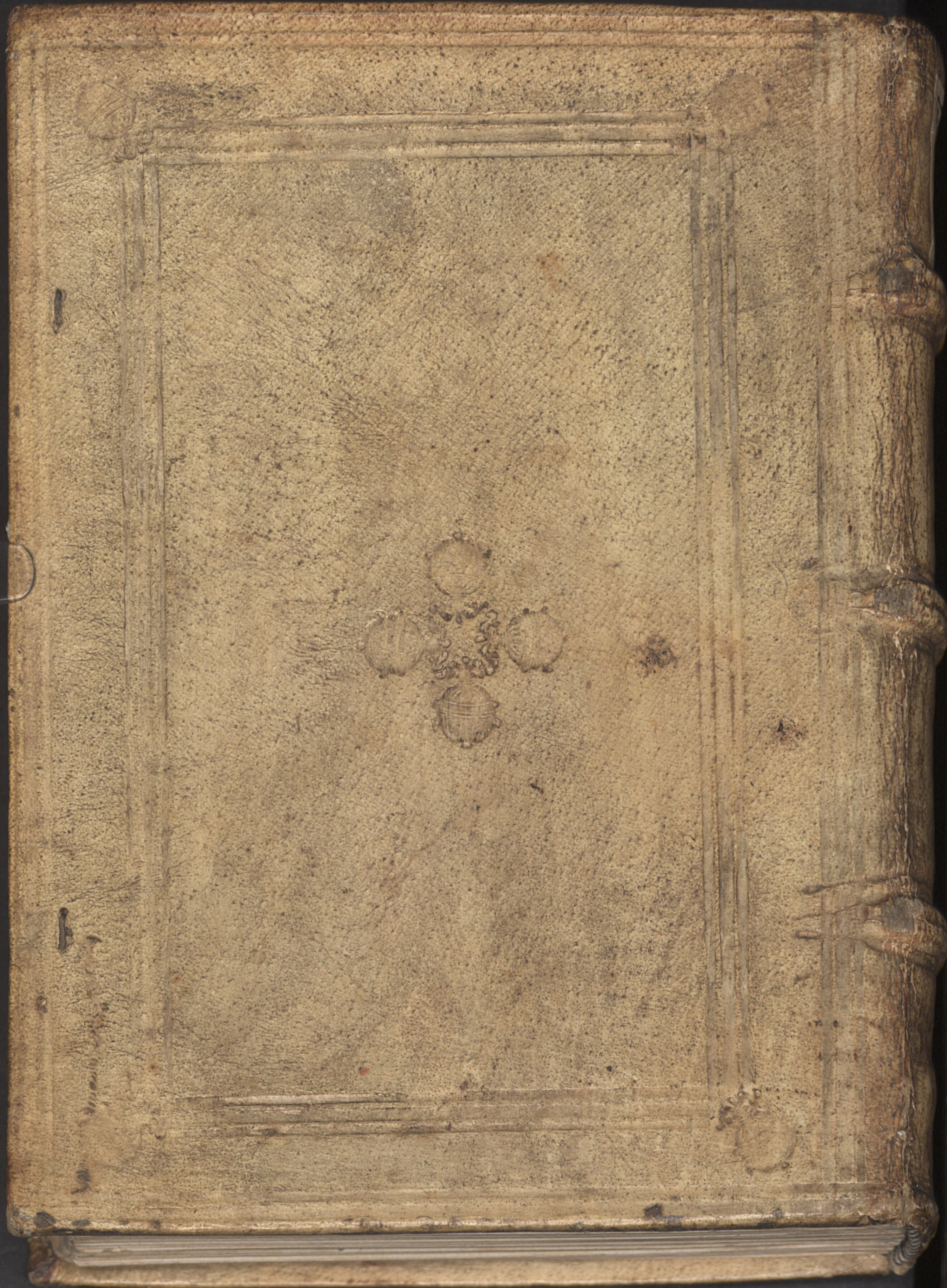
I. Schüden: *06, 2, 11, 17, 20, 20*

II. Behandlung: *2, 4, 6, 13, 25, 36, 40, 42*

III. Besonderheiten :













Reinhold, Erasmus

Primvs Liber Tabvlarvm Directionvm Discentibvs Prima Elementa Astronomiae  
necessarius & utilissimus ; His Insertvs Est Canon secundus ad singula  
scrupula qudrantis propagatus ...

Tvbingae 1554

4 Eph.astr. 107

urn:nbn:de:bvb:12-bsb00017189-4

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